The Metolius River

Connecting People and Place

PRODUCED BY

UPPER DESCHUTES WATERSHED COUNCIL

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www.UpperDeschutesWatershedCouncil.org

The Metolius to me means the life of Camp Sherman.
The river is the reason it is on the map.

SIXTH GRADE STUDENT, BLACK BUTTE SCHOOL

METOLIUS RIVER WITHIN THE UPPER DESCHUTES SUBBASIN

UPPER DESCHUTES
WATERSHED COUNCIL

The Upper Deschutes Watershed Council seeks to protect and restore the watersheds of the Upper Deschutes River through collaborative projects in restoration, monitoring, and education.

Through Their Eyes

During the spring and fall of 2014, twenty fourth through eighth graders from Black Butte School in Camp Sherman spent time studying and experiencing the river that runs through their backyard, the Metolius River. With the help of the Upper Deschutes Watershed Council, students visited the river on several occasions to explore, investigate, and connect with the natural world.

Students collected scientific data as they tested water quality, collected macroinvertebrates, and identified riparian plants. They also spent time writing poetry, creating art, and quietly reflecting while sitting next to the river. Through their field experiences with the Watershed Council, the students developed and expanded their own personal connection to the river.

The education goals of the Upper Deschutes Watershed Council are to connect youth to the natural world through interdisciplinary activities in science, art, writing, music and outdoor exploration in order to help them establish a desire to protect and take care of the places that they love. When students are given the opportunity to learn about their home watersheds, rivers, and streams through hands-on education, they are empowered to develop an informed sense of place and sense of stewardship.

In this brochure, Black Butte School students share some of their observations, creative writing, and artwork that they have created over the last few months. By seeing a snapshot of the river through the eyes of a student, community members of all ages and all walks of life can develop a profound understanding about the long-term restoration and stewardship needs of the Metolius River.

For me the Metolius has always been amazing and beautiful. It was a stroke of luck that I got to come live here.

SEVENTH GRADE STUDENT, BLACK BUTTE SCHOOL

The Metolius is a really big part of me.

I really felt connected to the river from the first moment that I saw it. My dad says I have a special connection with water and I think it started here. The river is more than just a river to me. It's a home, my home. I always feel good around here. I love art as well and one of my favorite things to draw and paint is the Metolius. Now that I think about it, my life kind of revolves around the river. Music is another thing I love that I can get from the river. The beat of the river is a part of me. The Metolius is a very life-changing river. I feel like I practically am the river. Flowing and strong is what I want to be. Powerful and graceful. Water is strong and ferocious. I believe that the river can be amazing. The river. The Metolius River.

Sydney Wilkins FIFTH GRADE STUDENT, BLACK BUTTE SCHOOL

The Metolius means family.
When I was younger, I came down with my family and stayed by the Metolius.

The Metolius means peace.
I love the soothing sound.

The Metolius means sacred.
When I found out my grandpa had cancer, I went to visit the river.

Abbey Busick EIGHTH GRADE STUDENT, BLACK BUTTE SCHOOL

The Metolius River means a lot to me. I enjoy being down by its cool, clean, refreshing waters. It helps me relax. I really enjoy the river and what it does for me.

Tasman Rheubens EIGHTH GRADE STUDENT, BLACK BUTTE SCHOOL

Springing to Life

Water rushes out of the headwaters at a rate of 50,000 gallons per minute.[1]

Bubbling out of the ground at the base of Black Butte north of Sisters, Oregon, the Metolius River literally springs to life. Due to the abundant year-round reservoir of groundwater absorbed by the area's porous volcanic rock, the Metolius River maintains a relatively stable flow with little yearly fluctuation. At its source, referred to as the Head of the Metolius, the water flows out of the ground at 48 degrees farenheit. Cold, clean water rushes out of a mossy bank of basalt rock, surrounded by ponderosa pines. Quickly, the Metolius grows into a full-fledged river within a few feet. The temperature remains relatively constant over its entire 28-mile course as the river continues to be refreshed by more cold-water springs and creeks.

The idyllic Metolius Springs and the surrounding area were originally owned by Sam Johnson, a wealthy lumber mill owner. Johnson preserved the springs in their natural state and allowed public access to a scenic headwaters viewing area located on his land. In 1965, Johnson gave the Metolius Springs viewing area to the Forest Service. The Head of the Metolius has received awestruck visitors for over a hundred years. [2]

Today, the Deschutes National Forest maintains a day-use viewing area overlooking The Head of the Metolius. The site is normally open from April until November. It includes a paved walkway from the parking area to the springs with interpretive

MACROINVERTEBRATES

I loved going down to the river and studying the macroinvertebrates. Macroinvertebrates are organisms without a backbone that you can see with a naked eye. We study them because they can tell us a lot about the river. If we find caddisflies and stoneflies in a river, we know it is healthy because they have to have very high quality water and cannot live in pollution. We found several sensitive types of macros which means that the Metolius River is very clean and has plenty of food for the fish.

Maddie Busick SEVENTH GRADE STUDENT, BLACK BUTTE SCHOOL

signs along the way. This portion of the river offers some of the most suitable and most used spawning habitat on the Metolius for redband trout and kokanee salmon. The meadow adjacent to the west bank of the river has, in previous years, been used as pasture for horses and other livestock, and has little riparian vegetation. However, in 2010 livestock grazing on the property was discontinued. The east side of the river is composed of an intact mixed species conifer forest.

The unique hydrology combined with the high quality of water that flows over the full length of the river is considered to be outstandingly remarkable and was an important factor in its designation as a Wild and Scenic River in 1988.Rivers that are designated Wild and Scenic in the United States are preserved for possessing outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic or cultural values. The designation also provides very strong protection against bank and channel alterations that may adversely affect river values, protects riverfront public lands from oil, gas and mineral development, and creates a federal reserved water right to protect flow-dependent values.[3] As one of the largest spring-fed rivers in the United States, the wild and scenic Metolius River winds its way north until it flows into Lake Billy Chinook where it meets the Deschutes River and the Crooked River.

At the Water's Edge

It's impossible to take an ugly picture of the Metolius.

John Banks

EIGHTH GRADE STUDENT,
BLACK BUTTE SCHOOL

The nearly constant streamflow of the Metolius has helped to shape the plentiful and complex vegetation along its banks. Riparian plants such as willow (*Salix*), mountain alder (*Alnus tenuifolia*), red-osier dogwood (*Cornus stolonifera*), and Douglas spiraea (*Spiraea douglasii*) grow plentifully along the river and provide important habitat for wildlife, protective cover for fish and leafy debris for the aquatic insects. In addition to providing habitat, healthy riparian vegetation also serves to maintain good water quality by retaining sediment and stabilizing river banks.

The beauty of the Metolius River is due in large part to the wide variety of plants and trees that thrive along its banks. As the river meanders north, upland forests of ponderosa pine and mixed conifers give way downstream to sagebrush and juniper. Rare species of wildflowers thrive here. Vegetation also flourishes in the river itself, growing upon bases of instream woody material and forming lush islands of greenery. The combination of these unique aspects of its ecology and hydrology contributed to the designation of the Metolius as a Wild and Scenic River.

Despite the beauty, abundance and variety of its vegetation, the health of these riparian areas has been negatively impacted by trampling and soil compaction due to a rise in recreational use of the river. In addition, the introduction

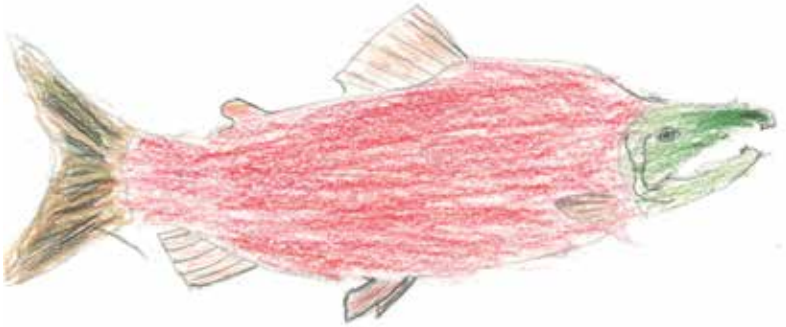
Peck's Penstemon,
(Penstemon pecki)
an herbaceous perennial plant of the Figwort family, is found in an area of approximately 485 square miles in the Deschutes National Forest. Seventy percent of the global population of the plant is associated with the Metolius River watershed. [2]

of non-native species competing with local plants poses another potential threat to the ecosystem. Examples of invasive species currently found along the Metolius include spotted knapweed, dalmation toadflax, ribbon grass, and yellow flag iris. The health of the river itself depends largely upon the health of its vegetation. Community members, local landowners, kayakers, hikers, and students are encouraged to contact the Upper Deschutes Watershed Council or the Deschutes National Forest to learn more about what they can do to eradicate harmful invasive species from the Metolius River and its riparian areas.

STUDENT REFLECTION

The first time I went for a walk in the forest I thought it was so beautiful. I felt like I belonged there like it has been calling my name for years. The forest is so special to me because it is the only place where I can be alone. Nothing to bother me. The place I can be me. Another reason the forest is special to me is because I feel alive there. No one is the boss of me. I can do what I want and no one makes fun of me. I can be my own person.

Jessi Glanz SEVENTH GRADE STUDENT, BLACK BUTTE SCHOOL



Returning Home

The Metolius River has long been known for its world-class fishery. Clean, cold water and abundant flows create the ideal conditions for proper growth and development of healthy fish. Once upon a time, the Metolius was teeming with spring Chinook and sockeye salmon. These anadromous, or ocean-going, species made the long journey to the sea before returning to the river to spawn. Historically, sockeye salmon traveled up Lake Creek, a tributary of the Metolius, and into Suttle Lake for rearing. When dams were constructed along Lake Creek and at the outlet of Suttle Lake for irrigation and power, the sockeye could no longer reach these important waters and by the 1940s, they were extinct in the Metolius basin. Similarly, Chinook salmon were eliminated from the river after the completion of the Round Butte Dams at Lake Billy Chinook in 1965. The dams were impassable for the fish thus causing these vital migrations to come to an end.

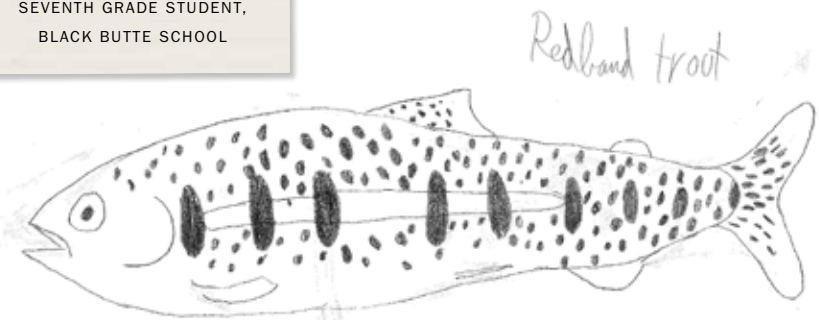
However, the story does not end there. A recent effort led by Portland General Electric and the Confederated Tribes of Warm Springs has implemented a process of transporting juveniles and adults around the Round Butte Dams. As a result, in 2012 sockeye and Chinook salmon returned to the Metolius River for the first time in over 50 years. The Upper Deschutes Watershed Council, in partnership with OWEB and others, restored fish passage at the Suttle Lake dam in 2014, and is currently addressing fish passage and screening along Lake Creek. The future remains hopeful that salmon will once again thrive in the Metolius River and its tributaries.

The Metolius River is a
beautiful sight with
very clean
water,
beautiful plants
on the edge,
blue
perfect
water, and
tons of fish.

SEVENTH GRADE STUDENT,
BLACK BUTTE SCHOOL

WHAT'S IN A NAME?

The Metolius River was given its name by the native people who first lived here. The word **Mpto-ly-as** is said to mean "white fish", "stinking water", or "spawning salmon." While the exact translation is up for debate, It is clear that the river was named for its abundant and healthy population of fish.[5]



Restoring the Future

In addition to cold, pristine waters, the presence of instream woody material is critical for quality fish habitat. When logs are present in a river, water is slowed down behind them, creating pools for fish to rest and hide in. Water and sediment can become partially dammed above the logs, creating an area of calm water where gravels can be deposited. These gravels form the perfect location for spawning salmon to lay their eggs. The logs also help to prevent the eggs from being washed downstream. Woody debris also traps leaves and other organic materials thereby providing food for aquatic insects such as stoneflies, mayflies and caddisflies. Healthy populations of insects are necessary for healthy populations of fish.

Removal of large woody material from the river and riparian area began in the 1930's to facilitate log

Woody debris that builds up in the river is critical for fish habitat.

rafting. Additional removal of trees from the river was continued for the purposes of obtaining firewood, salvage logging, boating safety, and camping safety. Coupled with Forest Service management practices, a flood in 1964 also caused a substantial loss of large wood from the river channel and riparian areas.[6] The large scale removal of trees in the river decreased the availability of cover, pools, and other important habitat features required for fish spawning and rearing.

In response to declining fish habitat, the Upper Deschutes Watershed Council partnered with the Deschutes National Forest to improve conditions in the Metolius River. Between 2008 and 2011, more than 900 whole trees were placed over nine miles of the river in order to restore pools and protective cover for native fish. By increasing instream woody material, habitat conditions have been improved for redband trout, bull trout, and recently reintroduced Chinook salmon. Project monitoring has already identified an increase in fish use of the restored instream habitat.

I notice...
The trees in front of the clouds,
The grass swaying in the cold breeze,
The peaceful silence that fills the air,
All the different colors and shapes,
And the beautiful sound of the river.

SIXTH GRADE STUDENT,
BLACK BUTTE SCHOOL

Looking Ahead

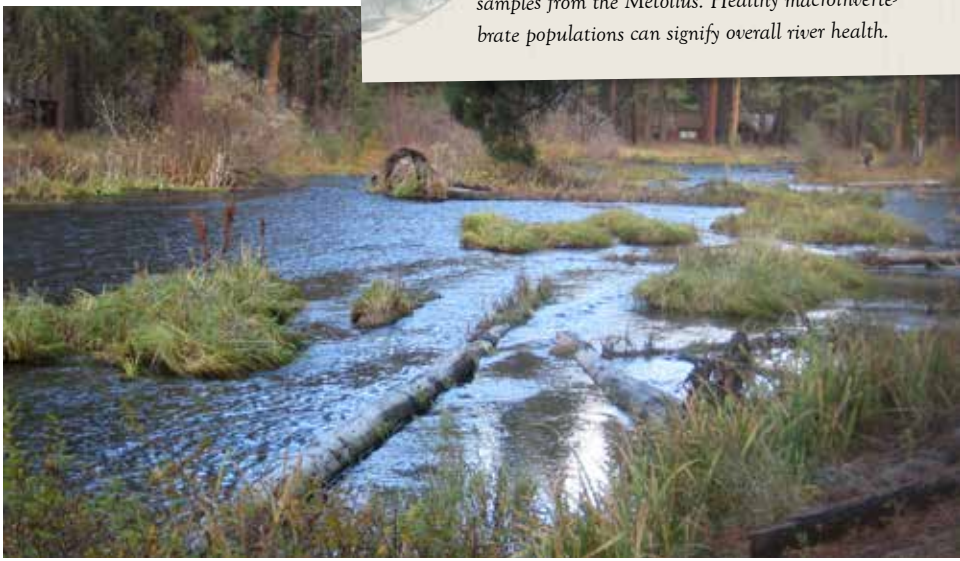
The long-term conservation goals for the Metolius River are to maintain a naturally functioning stream channel and protect the riparian margin along the stream to benefit fish habitat and improve water quality. By working with the Deschutes National Forest, local landowners, community members, and students, the Upper Deschutes Watershed Council seeks to raise community awareness about ongoing restoration efforts and the value of protecting naturally functioning streams. An informed and engaged watershed community can ensure that the Metolius River is protected for generations to come.

There are many ways for local community members to get involved to protect and restore the Metolius River. By making informed land management choices, volunteering to help with a restoration project, and developing a long-term watershed stewardship approach, community members of all ages can actively participate in the protection of their home watershed.

The Metolius River
Mystical
Magical
Peaceful
Calming
Soothing
Clear
Pretty
Water
Constant
Flowing
Fountain of youth.

SEVENTH GRADE STUDENT,
BLACK BUTTE SCHOOL

Sixth grade student collecting macroinvertebrate samples from the Metolius. Healthy macroinvertebrate populations can signify overall river health.



Endnotes

[1] 1000 Friends of Oregon: www.friends.org/trail/metolius

[2] Sisters Country Historical Society: http://sisterscountryhistoricalsociety.org/OV-Head%20of%20Metolius.htm

[3] USDA. Deschutes National Forest. Metolius River Wild and Scenic River Management Plan. 1996

[4] USDA. Deschutes National Forest. Pajutee, Maret. Species Conservation Strategy for Peck's Penstemon. 2009

[5] Travel Oregon: www.traveloregon.com

[6] Oregon Department of Fish and Wildlife. Metolius River Subbasin Fish Management Plan. 1996.