



The River Mile

Expansion, Enhancement and the 2016 National Park Service Centennial

The River Mile has been restricted to schools and K-12th grade students directly surrounding Lake Roosevelt NRA. The number of requests to participate in the program exceed/exceeded staff ability to conduct The River Mile programs for additional groups (adjacent to the park or further away). So, the focus of development of The River Mile program was shifted from ranger-conducted student programs to training teachers, and select students, to conduct their own watershed health monitoring programs and research projects.

In order to provide as many opportunities as possible for teachers and students to participate in The River Mile, we employ a large variety of delivery methods for training and networking. Trainings are conducted both in person and virtually through webinars, conference calls and recorded trainings available on program webpages. We learned early on that the program would be different at every river mile site and so we changed development of materials and training so that groups could find something and participate at whatever level best suits their group and site.

By expanding The River Mile we have been able to link/connect teachers and students in NE Washington with resources and opportunities that would not otherwise be available to them. These groups have had the opportunity to connect with, and have the ability to regularly network with, some of the leading science educators and scientists in the Columbia River Watershed. In order to provide these opportunities we have partnered with a large network of educators, environmental educators, and resource specialists throughout the watershed. These partners have collaborated on training materials, provided training to park staff and program participants, served as keynote speakers and concurrent session presenters for symposia and seminars, provided data, and assist schools with their projects.

Interest in The River Mile by resource agencies, environmental educators, and education professionals continues to grow. Formal partnerships are beginning to develop. Some of these partnerships bring expertise in education others bring expertise in subject matter. Three main partners have been working with the park for the expansion of the program: Pacific Education Institute, NatureMapping and the Lake Roosevelt Forum. These organizations represent education and natural and cultural resource professionals and provide excellent connections and resources. In addition, hundreds of informal partners assist with many different aspects of The River Mile. This assistance comes in the form of presentations, programs, subject matter expertise, resources, serving as watershed coordinators and training.

The Plan for the Future

Our goal is for The River Mile to be available to the entire Columbia River Watershed in the United States for the centennial of the National Park Service in 2016. We will provide multiple in-person and virtual professional development opportunities which engage both new and experienced educators, and motivated students, in The River Mile and provide diverse opportunities which continue to engage over time to increase participation.

FY12 Phase 1: Pilot Expansion

During the 2012 summer a test expansion workshop was presented. This test expansion workshop consisted of 21 teachers from 18 school districts throughout the Columbia River Watershed in Washington and Oregon. These teachers are testing model program materials and network sharing venues. During the 2012-13 school year more than 1300 students, 54 teachers, 21 school districts and 100 resource partners actively participated in the program. The workshop also included a few informal educators interested in The River Mile as well as educators interested in the training but not able to participate in the test expansion. As of March 1, 2013, 95 teachers and more than 4600 students from 21 school districts have participated in The River Mile in some manner.

FY14-FY15 Phase 2: Scale-Up Recruitment for Infrastructure

During 2014 and 2015 we will lay the foundation and infrastructure for recruiting, training and supporting a network of watershed coordinators who serve as local area representatives for The River Mile. These coordinators may be formal or informal educators who want to participate in The River Mile network and are willing to serve as point of contact, and provide training and network assistance to teachers, students, resource managers and scientists in their local area.

Lake Roosevelt National Recreation Area, in partnership with Pacific Education Institute, is seeking funds for The River Mile Institute to develop and present a train the trainer course which will recruit and train watershed coordinators.

The River Mile Train the Trainer will include recruitment events such as webinars and conference/meeting gatherings of potential participants held in 2014 and spring 2015. Summer 2014 we will hold a planning group meeting for 2 days. This gathering will be of those that have been peripherally associated with The River Mile. Fall 2014 we will hold meetings for ESD Science Coordinators, school administrator, and regional groups (informal educators). These meetings will inform participants about The River Mile, benefits of participation, recruitment for watershed coordinators and timeline for bringing new groups into the program.

March 2015 we will hold a conference for educators (formal and informal) and Watershed Coordinators in conjunction with the Lake Roosevelt Forum Meeting held in Spokane, Washington. This meeting is a gathering of scientists, resource specialists, resource managers and public land managers interested in the Columbia River Watershed. This is an opportunity

for educators to meet and learn directly from the scientists conducting research in the Columbia River Watershed.

Spring and early summer 2015 we will recruit and screen applicants for Watershed Coordinators who will participate in the summer train the trainer event. Watershed coordinators will be volunteers from a variety of agencies, organizations and educational institutions and their time will be an in-kind contribution to The River Mile.

Summer 2015 we will hold the train the trainer course which will include webinars (orientation and ArcGIS Online) and the in person 5-day training event in Grand Coulee, Washington. We expect approximately 20-30 participants to participate in the train the trainer event, with the network reaching groups throughout the Columbia River Watershed. This workshop is training the leadership of The River Mile.

By laying this foundation we will be able to reach and work with educators and partners throughout the watershed when the program is open to the entire watershed in 2016 for the National Park Service centennial.

FY16 and FY17 Phase 3: Expansion

During 2016 and 2017 we will provide professional development opportunities throughout the watershed for K-12th grade educators to participate in The River Mile network. Professional development will include webinars and in-person 1, 3 and 5-day trainings held in the Grand Coulee, Washington area. Three day workshops will be offered in the spring and fall, a 5 day workshop will be offered during the summer and at least two additional 1 day workshops will be offered in the fall or spring. Each workshop would serve approximately 20 participants for a total of 100 teachers.

In 2016 we will present “The River Mile Youth Summit” an NPS Centennial opportunity for youth in the Columbia River Watershed to gather, share, learn and plan for the health of the Columbia River Watershed. The Youth Summit seeks to increase the impact of the program for a small number of students.

The Columbia River Watershed consists of diverse communities. Participants in The River Mile come from urban environments such as Portland, Oregon as well as the rural communities such as Inchelium, Washington. The River Mile connects people in these diverse communities to the parks, trails, greenways and waterways in their backyards as well as to the people and places in other communities for the purpose of increasing stewardship of the Columbia River Watershed Ecosystem.

The River Mile Youth Summit participants will come from diverse communities including urban environments such as Portland, Oregon as well as the rural communities such as Hunters, Washington. The River Mile connects people in these diverse communities to the parks, trails, greenways and waterways in their backyards as well as to the people and places in other

communities for the purpose of increasing stewardship of the Columbia River Watershed Ecosystem.

The River Mile

Connections to National Park Service Call To Action

The River Mile supports the following National Park Service special emphasis areas: Parks As Classrooms, Partnerships, A Call to Action: Advancing the NPS Education Mission, Connecting People to Parks and Indian Tribe Inclusion.

Scale-up of The River Mile supports “**A Call to Action**” because it is seeking to expand the impact of the program through a network of partners and schools. This expands exposure of the National Park Service to a number of people as well as a variety of agencies and organizations throughout the Columbia River Watershed. The vision and goals of The River Mile directly support “A Call to Action: Connecting People to Parks.”

The River Mile Youth Summit supports “A Call to Action” because it seeks to increase the impact of the program for a small number of students. The summit will enhance the connection these students have with the watershed and through that the National Park Service as facilitator of the event and The River Mile.

Indian Tribe Inclusion: The Columbia River Watershed consists of diverse communities including urban environments such as Portland, Oregon, rural communities such as Inchelium, Washington and a number of Indian reservations. The River Mile connects people in these diverse communities to the parks, trails, greenways and waterways in their backyards as well as to the people and places in other communities for the purpose of increasing stewardship of the Columbia River Watershed Ecosystem.

Advances the NPS Education Mission: The River Mile advances the NPS Education Mission by increasing the National Park Service’s ability to reach large numbers of students, educators, resource managers, scientists and environmental educators. As facilitator and coordinator of the program there is the potential for an extremely large increase in the number of people who are touched by the National Park Service. We will accomplish this through a variety of methods including, but not limited to, social media, webinars, websites, ArcGIS, NatureMapping, printed materials, partners and shared scientific projects that contribute real world data.

The River Mile Youth Summit advances the NPS Education Mission by increasing the National Park Service’s impact upon youth as they work with the Columbia River Watershed. The River Mile is a key component of protecting and improving the health of the Columbia River Watershed. It is a collaborative effort to “promote large landscape conservation to support healthy ecosystems and cultural resources.” The Youth Summit seeks to engage students in this conservation effort through an in-depth experience.

Preserving America’s Special Places: The River Mile will be a key component of protecting and improving the health of the Columbia River Watershed. It is a collaborative effort to “promote

large landscape conservation to support healthy ecosystems and cultural resources.” The Youth Summit is a collaboration with multiple land managers and partners to support the ecosystem health of the Columbia River Watershed. Students will be exposed to current scientific knowledge and will learn about maintaining large ecosystems.

Enhancing Professional and Organizational Excellence: The River Mile seeks to create pathways to career opportunities for students. The program is designed for K-12th grade participation where students build on previous knowledge and continue to grow in their understanding of watershed health over multiple grades. The Youth Summit continues this and enhances participants exposure to natural and cultural resource careers. These students may be the next generation scientists and resource managers of our ecosystems.

The River Mile

Partnership Support

The River Mile is currently supported by:

- Lewis and Clark NHP, providing assistance with teacher workshops
- Whitman Mission NHP, presentations and planning assistance
- Riverside State Park
- Steamboat Rock State Park
- Washington Educational Service District 101
- North Central Service District and ESD 123
- Spokane County Conservation District, has assisted with initial plans for expansion
- US Army Corps of Engineers Chief Joseph Dam, provides presentations and events
- US Fish and Wildlife Service Mid-Columbia River National Wildlife Refuge Complex,
- Vancouver Water Resource Education Center,
- Columbia River Maritime Museum, provides assistance with teacher workshops
- The Lake Roosevelt Forum assists with administration of funds to teachers, workshop development, present workshop sessions and provide materials.
- Washington State Department of Health provides consulting and free specimen metals tests for crayfish
- Washington State Department of Ecology Water Quality Section provides consultation for program development and workshop sessions in environmental education programs. (in-kind)
- Stonerose Fossil Beds, provides presentations
- Spokane Audubon Society, presentations
- West Valley Outdoor Learning Center, presentations
- Greg Behrens, Retired Geologist, Bureau of Reclamation will assist with the workshop in training teachers in the use of GPS. Mr. Behrens will provide consultation and workshop instruction. (in-kind)
- Gonzaga University Department of Education provides on an on-going basis consultation and programs for The River Mile teacher training. (reimbursed and in-kind)
- NatureMapping Foundation provided consultation for training development, instruction in the NatureMapping program, use of the on-line database for data storage. (in-kind)
- US Bureau of Reclamation at Grand Coulee, Washington and/or Grand Coulee Dam School District will provide the facilities for the 5-day workshop. (in-kind)
- Colville Confederated Tribe, Fisheries program provides workshop sessions, professional consultation, environmental education programs, and field personnel for programs around Lake Roosevelt. (In-Kind)
- Spokane Tribe of Indians, fisheries and wildlife program provides workshop sessions, professional consultation, environmental education programs, and field personnel for programs around Lake Roosevelt. (In-kind)
- Teachers and students from several schools are instructors for professional development. Columbia School teachers and students provide instruction related to crayfish and the

crayfish study. Students and teachers from Reardan High School and Wilbur High School are speakers for trainings, the symposium, and external conferences. (time in-kind)

- Lake Roosevelt National Recreation Area's resource management specialist, and any staff, assists with development of resource management projects, provide instruction at teacher workshops, assist with development of "The River Mile" program, provide sessions at the student science symposium, review and edit newsletters and other publications, meet with teachers to develop projects, calibrate water meters and other equipment, provide advice on equipment purchases and assist with learning how to use equipment.
- Pacific Education Institute

Staff from these partners serve as workshop instructors, symposium and seminar speakers and presenters, assist as consultants in the development of The River Mile and others will work directly with teachers and students either in development of their program or in additional training throughout the year. Partners will also assist with the Youth Summit. The majority of participation and support by these organizations is in-kind.

The park and Pacific Education Institute are in the process of establishing a formal cooperative agreement for collaboration on teacher training for The River Mile. They provide free clock hours and coordinate and arrange for college credit as needed for all professional development; they serve as consultants in the development of teacher and student training and work with the park to seek funds for The River Mile professional development and program development. We are currently jointly seeking funds from the EPA for 2014-15 scale-up. (in-kind)

The River Mile

Infrastructure Needs

Full Program Level

Staff

GS-11 (me)

GS-5, 7, 9 Education

- permanent, full time
- conduct field programs
- work with LARO TRM schools in developing their projects
- create marketing pieces
- assist with workshops
- conduct classroom and in-park programs for all schools
- assist with development of new programs and materials
- Coordinate the traveling trunk program

GS-7 Interp Lead

- if I supervise interpretation at Spring Canyon, then I need this position to do Interpretation and coordinate interpretive programs and staff
- Seasonal, subject to furlough or permanent
- Minimum May 1 –September 30
- Interp at Spring Canyon, Grand Coulee Dam Visitor Center, etc.

GS-5 Seasonal(s) 2

- 1 To conduct classroom and field programs
- August 15 –June 15th season
- 1 to conduct interpretation programs
- May 1 – September 30

Interns (1-2) SCA or AmeriCorps

- to assist with programs
- August 15-June 15

GS-5 Administrative Assistant

- Administration
 - Budget, scheduling, reservations, filing, statistics, copying, property management, VIP coordination, in-kind tracking, IT, mailing, equipment inventory, park committees and travel prep
 - Share with Interp

Work that needs to be done by all of the above:

- Assist w/TRM Management
 - Coordinate LARO school programs, projects, site visits, and equipment
 - Data management and entry
 - ArcGIS

- Participation map, crayfish data, water quality data
 - Create new maps, capture, save and upload data from collector maps
 - Social media: Facebook, website, Edmodo, twitter, newsletter
 - Webinars
 - Canvas for presenters
 - Arrange webinar schedule
 - Registrations
 - record
 - Marketing
 - On-line and in print
 - Crayfish study management
 - Data, permits, troubleshooting, teacher training, work with researchers, write reports
 - New resource management projects
 - Quaga mussels
 - Work with schools and Resource management
 - Coordinate study
 - Bats
 - Work with schools and resource management
 - Coordinate study
 - Festivals, Symposium, Natural Resource Career Day(s), science competitions
 - Logistics,
 - Presenters
 - Awards
 - registrations
 - Teacher Workshops
 - Marketing, Logistics, instruction, registration
 - schedules
 - Coordinate Watershed Coordinators
 - Training, materials, network
 - Review and revise programs and materials
 - Develop education standards rubric
 - Work with partners
 - PEI
 - LRF
 - Watershed coordinators
 - Develop new materials and programs
- Education Program
 - Traveling Trunk program
 - Reservations, shipping, check in and out, storage, repair and rehab
 - Revamp Geology trunk and begin offering again
 - marketing
 - Classroom and In-Park programs
 - Conduct

- Registration
 - marketing
- Prepare Festivals
 - Fur Trade Festival
 - Balde Eagle Festival
 - Marketing
 - Registrations
 - presenters
- Develop and present new programs for Fort Spokane, Fur Trade, Ice Age Floods, Pre-dam (minimum grade level GS-7 work)

Facilities

Classroom

- Remodel Spring Canyon concessions building to one classroom and storage facility.

Storage

- See above
- Reorganize existing
- Additional?

Office Space

- For year round and seasonal education staff
- Space for 5-7-9
- Space for seasonals and interns
- administration

Equipment

Computers

- Some of these need to be laptops or notebooks that can be used with classroom programs
- 2 to 3 new

Ipads or Android Tablets

- For field programs
- 30-40

Phones

- Additional phones will be needed for additional staff
- 2-3

Vehicles

- 1 for permanent staff
- 2 for seasonal staff and intern(s) to share
- Fuel
- At least 2 need to be full size to pull trailers or for full loads. Others can be economy cars which are good in winter driving conditions.
- Boat and boating supplies

Supplies

- Program supplies
- Misc office supplies

Desks and chairs

- 1 for each full time
- 1-2 shared for each seasonal and intern

Misc.

- Lifejackets
- Canoes
- paddles

The River Mile

Expansion Budget

Staff	\$149,634/\$159,828/\$173,789*
• GS11 \$65,713	
• GS5/7/9	
○ \$31,628/\$11069	
○ \$39,179/\$13712	
○ \$49,520/\$17332	
• GS5	
○ \$15.15/hr=\$16,953	
○ Benes \$1271.46	
• Intern 12 months	
○ \$23,000	
Sub Total	\$149,634/\$159,828/\$173,789
School Reimbursements	\$6,000
• Travel	
○ \$3,500 per year	
• Subs	
○ \$2,500 per year	
Supplies	\$8,000
• programs	
○ In-Park/NE WA	
▪ \$1000	
○ Watershed	
▪ \$1000	
• Postage	
○ Shipping and letters	
▪ \$4000	
○ Traveling Trunks Shipping	
▪ \$1000	
• Office supplies	
○ \$1000	
Travel	\$10,000
• \$10,000	
Training	\$4,000
• Staff professional development	
○ \$4,000	

Festivals **\$9,000**

- Balde Eagle
 - \$1500
- Fur Trade Festival
 - \$1500
- Symposium
 - \$1500
- Natural Resource Career Day
 - \$1000
- Bio-Blitz
 - \$3000

Contracts **\$14,000**

- Speakers
 - \$2000
- Graphic artists
 - \$2000
- Web specialists
 - \$5000
- Internet/web service
 - ?
- Education specialists
 - \$5000

Marketing and Graphics **\$8950**

- Flyers
 - Training flyer
 - Pictures and graphics
 - Data layers/assistance \$3000
- Produce Education Program Booklet
- Park programs available in NE Washington
 - Print \$1200
- The River Mile Marketing Materials
- Full color tri-fold
 - Create
 - Print \$2000
 - Program Area materials
 - Printing \$750

Subscriptions **\$2,500**

- Organizations
 - NSTA
 - WSTA

- NAI
- NAAEE
- Tools
 - WebEx subscription
 - \$1300
 - Enewsletter
 - \$250

SubTotal: **\$62,450**

Total **\$212,084/\$222,278/\$236,239***

*based on FY14 levels

The River Mile

Infrastructure Expansion

By Year

FY14

Market All Education Programs

SCA Intern

- 12 months, April to April
- Traveling Trunks, assist with organization, data entry, website, Facebook, conduct education programs (classroom and field), assist with festivals, equipment inventory

Kettle Falls Information Center GS-7

- Travel Trunks

Resource Management/Education Position

- Review crayfish protocols; create long term crayfish research permit; ArcGIS data layer assistance

GS-5 Seasonal

- May to mid-June and September to November 2014
- Traveling Trunks, assist with organization, data entry, website, Facebook, conduct education programs (classroom and field), assist with festivals, equipment inventory

FY15

Increase Marketing All Education Programs

Prepare announcement for Centennial

Announce and Fill GS-5/7/9 Permanent position.

Move GS-9 Education Specialist position to GS-11

Conduct summer 2015 train the trainer event

SCA Intern

- 12 months, August to August
- Traveling Trunks, assist with organization, data entry, website, Facebook, conduct education programs (classroom and field), assist with festivals, equipment inventory

Kettle Falls Information Center GS-7

- Travel Trunks

Resource Management/Education Position

- Review crayfish protocols; create long term crayfish research permit; ArcGIS data layer assistance. Add Bat study if not added in FY14

GS-5 Seasonal

- February to mid-June and Mid-August to November
- Traveling Trunks, assist with organization, data entry, website, Facebook, conduct education programs (classroom and field), assist with festivals, equipment inventory

GS-5/7/9 Permanent

- Traveling Trunks, assist with organization, data entry, website, Facebook, conduct education programs (classroom and field), assist with festivals, equipment inventory
- First year a training position where they learn the classroom and field programs along with statistics collection and general administrative duties. Reviews curriculum pieces for editing. Makes suggestions to supervisor. Participates in all teacher training. Works with Resource Management to learn about crayfish, bats, water quality, etc.

Notes:

- ❖ Grants include expansion coordinator position
- ❖ Need someone who can regularly update facebook, twitter, park website AND download data from collector maps and then update TRM maps in ArcGIS Online.
- ❖ SCA, GS-5/7/9 and GS-11 work together to decide division of duties and plan for staff "structure."

FY16

NPS Centennial

Enhanced marketing of education programs

Increased availability of education programs

SCA Intern

- 12 months, August to August
- Traveling Trunks, assist with organization, data entry, website, Facebook, conduct education programs (classroom and field), assist with festivals, equipment inventory
- More than one position. Second position could be seasonal

Kettle Falls Information Center GS-7

- Travel Trunks

Resource Management/Education Position

- Review crayfish protocols; create long term crayfish research permit; ArcGIS data layer assistance. Add Bat study if not added in FY14

GS-5 Seasonal(s)

- January to mid-June and Mid-August to December
- Traveling Trunks, assist with organization, data entry, website, Facebook, conduct education programs (classroom and field), assist with festivals, equipment inventory

- More than one position

GS-5/7/9 Permanent

- If enough time in grade, move to GS-7
 - Traveling Trunks, assist with organization, data entry, website, Facebook, conduct education programs (classroom and field), assist with festivals, equipment inventory
 - Second year continue training as needed.
 - Conduct classroom and field programs, collect statistics and enter, general administrative duties, begin handling reservations if not already, develop marketing materials, begins looking at curriculum pieces and with supervision revises or creates new. Participates in some teacher training.
 - Works with Resource Management and begin working with TRM schools to develop their projects.
- ❖ Begin planning Youth Summit in late 2015.
 - ❖ Present Youth Summit spring 2016
 - ❖ Grants include teacher assistant for TRM teacher institute
 - ❖ Plan and present TRM Teacher Institute summer 2016

FY17

Enhanced marketing of education programs
Increased availability of education programs

SCA Intern

- 12 months, August to August
- Traveling Trunks, assist with organization, data entry, website, Facebook, conduct education programs (classroom and field), assist with festivals, equipment inventory
- More than one position. Second position could be seasonal

Kettle Falls Information Center GS-7

- Travel Trunks

Resource Management/Education Position

- Review crayfish protocols; create long term crayfish research permit; ArcGIS data layer assistance. Add Bat study if not added in FY14

GS-5 Seasonal(s)

- January to mid-June and Mid-August to December
- Traveling Trunks, assist with organization, data entry, website, Facebook, conduct education programs (classroom and field), assist with festivals, equipment inventory
- More than one position

GS-5/7/9 Permanent

- If enough time in grade and experience, move to GS-9
- Traveling Trunks, assist with organization, data entry, website, Facebook, conduct education programs (classroom and field), assist with festivals, equipment inventory
- Provide additional professional development as needed
- Conduct classroom and field programs, collect statistics and enter, general administrative duties, handle reservations if not already, develop marketing materials, look at curriculum pieces and revises or creates new. Participates in some teacher training, may conduct some teacher training.
- Works with Resource Management and continues working with TRM schools to develop their projects.

❖ Conduct TRM teachers institute

Appendix

PMIS and Grant Proposals

FY12 Phase 1: Pilot Expansion
PAC - The River Mile Teacher Institute
PMIS 157725

FY15 Phase 2
EPA Grant Submission

FY16 and FY17 Phase 3
Expand The River Mile Through Professional Development for Teachers
PMIS 195273 A and C

FY16 Youth Summit
PMIS 195273 B