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THE UNIVERSITY OF MONTANA

INSTITUTE
FOR EDUCATIONAL OPPORTUNITIES

Cfwep.Org** (formerly the Clark Fork Watershed Education Program) **fosters environmental stewardship and scientific decision-making through place-based learning.

Status Report for BSB Storm Water Education Program
Reporting Period: January 1, 2016-December 31, 2016
Report Submitted By: Rayelynn Connole, Director
Date Submitted: February 22, 2017

Executive Summary

This report reflects the work completed to date, a summary of results from educational outreach events, and recommendations for next steps related to storm water education and outreach. During the 2016 contract year, the team reached several milestones including publication of TV and radio spots related to stormwater awareness. The team also completed several outreach events including presentations for local community groups.

The project partners have produced three TV commercials and four radio ads that will played April through August 2016. The radio spots continue to play as of this writing during Public Service Announcement times and on the local community radio. Currently, the team is reviewing efficacy and reach of the TV and radio spots in order to plan for the 2017 spring runoff season.

The educational outreach events were highly successful, most notably the Clean Up Blacktail Stream Event, which doubled capacity in the 2016 year. This year, an additional elementary school, West Elementary school had 100 additional students attend. The local radio station, newspaper, and TV stations covered the event. The students and volunteers cleaned both Blacktail Creek and the historic Silver Bow Creek channels this year. The team successfully recruited an additional 15 adult volunteers to help with the day.

Butte Central High School continues to be a strategic partner within the drain marking and mapping campaign. Students at the high school marked 50 drains this past season and completed the stormwater PSA's and social media campaign in the spring of 2016. For the 2017 contract year, BCHS students will produce another set of PSA's and continue with the mapping project.

Cfwep.Org and Butte Silver Bow partnered to create a public art campaign for stormwater. Artist volunteers participated in training about why stormwater issues are important and relevant for our community, then followed up with painting storm drains within the Montana Folk Festival event area to increase community awareness. The 2016 Folk Festival art piece was located on a strategic corner of the festival area and was completed by three local artists and a volunteer from the Big Sky Watershed Corps.

The stormwater signal box art was installed in June of 2016. The team is currently seeking outside sponsorship, funding, and artwork to wrap an additional four signal boxes in the uptown area.

Deliverable #1**:** *Develop, implement and evaluate a variety of place-based classroom and field storm water curriculum, including storm drain marking for use in Butte public and private schools and school education festivals. The target number of students to be served annually with this program is to be greater than or equal to 200 students per year.*

Cfwep.Org served elementary students, grades 4-6; middle school students, grade 8; and high school students, grades 9-10. The total number of students served students through dedicated stormwater programming was 300. This count includes elementary students and middle school students through Montana Tech visit days and the Blacktail Creek Clean-up Day. A total of 24 high school students participated in the stormwater inventory, drain marking and mapping curriculum. In addition to the direct service numbers, Cfwep.Org hosted a number of public outreach events that included students. Cfwep.Org conducted tours for 200 participants. The tours include discussion of historic mining practices, current remediation and restoration efforts, and the future of stormwater problem-solving.

The elementary and middle school students visited the campus of Montana Tech. During the visit days, BSB storm water issues were discussed, including the sources of storm water pollution, the effects of various contaminants, and overall good housekeeping for home owners. Cfwep.Org staff members provided an update regarding the on-going storm drain restoration projects within BSB and shared the storm water engineering technology used throughout BSB, including the digital mapping of storm drains collected by WET.

The elementary student programming included the Clean Up Blacktail Stream (CUBS) day during which students and volunteers removed over 200 bags of trash from a 3-mile stretch of Blacktail Creek and a 2-mile stretch of historic Silver Bow Creek. Both creeks are located immediately within walking distance of the elementary schools and are considered urban streams. The clean-up day included activities and discussions for the students and volunteers about stormwater. In addition to the student volunteers, Cfwep.Org recruited 40 community volunteers to help with the clean-up event and numerous sponsors for the event. Numerous local engineering firms and businesses sponsored the event this past year.

The 3-day high school programming includes classroom time during which students learn about stormwater issues, methods for controlling stormwater, and Butte Silver-Bow's ordinance and Storm Water Management Plan (SWMP). Secondly, students complete a stormwater inventory of their home and their school, marking on maps areas that are high risk for increased run-off. Finally, the Cfwep.Org staff members teach the students data collection methods for mapping storm drains that are unmarked. The students complete the inventory of unmarked drains surrounding the school with Cfwep.Org staff on one day and spend and additional day with their teacher mapping drains. The team marked 50 drains in the Spring of 2016. In addition, the

Butte Central students created public outreach pieces including radio ads, print materials, and social media videos. The radio ads are part of the current playlist on KBMF 102.5 and were featured on KAAR, KOPR, and KMBR during the Spring of 2016.

Deliverable #2: *Coordinate work and efforts with Water and Environmental Technology (WET) firm to review annual data regarding target pollutant sources and develop targeted public outreach education materials to address the pollutants found to exceed limits.*

This deliverable was identified by the project team in 2012 as a method for targeting appropriate entities for outreach. For example, if the sampling reports identified nitrogen and phosphorous as exceeding standard, perhaps targeting outreach to golf courses and individual citizens would be appropriate. The development of the public awareness campaign including print, radio and TV media are result of this targeted outreach. The radio and TV ads specifically address what homeowners can do to reduce run off from their properties, including reducing the use of fertilizers and detergents.

Deliverable #3: *Participate in development of the Storm Water Management Plan with BSB Public Works and WET.*

Rayelynn Connole and Matt Moore have been in regular contact regarding the BSB stormwater plan. BSB and Cfwep.Org partnered with development of the commercials, the stream clean-up event, and the public art project. As of this writing, the partnership is working effectively. Cfwep.Org assisted with the DIG BUTTE trainings that WET and BSB provided for BSB staff in 2016.

Deliverable #4: *Develop with WET and BSB Public Works, an outreach strategy for addressing the goals of the Storm Water Management Plan including but not limited to developing: radio public service announcements, newspaper ads, social media, and workshops.*

The TV and radio ads aired from April of 2016 to August 2016. Cfwep.Org routinely addresses stormwater issues through the Facebook and twitter feeds of the organization. Cfwep.Org presented for three local community organizations regarding stormwater in 2016. Those presentations were provided to Butte Silver Bow Kiwanis Club, Butte Exchange Club, and the Restore Our Creek Coalition. Cfwep.Org was invited to discuss storm water issues during the talk radio show, “Party Line” in September 2016. The staff team is now a monthly spot on the radio show.

Deliverable #5: *Host an annual community event related to storm water issues such as a stream clean-up event.*

On May 27, 2015, Cfwep.Org hosted the third-annual Clean Up Blacktail Creek (CUBS) day with assistance from 110 Whittier Elementary students, 100 West Elementary students, 24 Butte Central HS students, and 40 community adult volunteers. Many local engineering firms also

contributed cash donations to the event, which allowed Cfwep.Org to host lunch for the students and adult volunteers. In addition, safety engineers from Pioneer Technical provided a safety talk for the event. The students and volunteers removed over 200 bags of trash within the two stream corridors. During the second half of the day, the Cfwep.Org staff members provided activities and discussions about stormwater, including what citizens can do to help maintain healthy stormwater for the students and volunteers.

http://missoulian.com/news/state-and-regional/new-data-reports-contamination-in-silver-bow-blacktail-creeks/article_3d07bf83-a7a4-5e7b-8f23-61ab12e645d1.html

The Stormwater Art piece for the 2016 Folk Festival was completed by three local artists and Evan Norman from the Big Sky Watershed Corps.

Deliverable #6: *Working with the Project Sponsor and/or its agents, develop and implement an educational training program for Butte-Silver Bow Public Works, Planning, other appropriate departmental staff and the public centering on the Project Sponsor's MS4 and the BSB Storm Water Ordinance.*

The partners delivered training for Butte Silver Bow staff members through the DIG BUTTE training program in spring of 2016. All trainings were well attended.

Deliverable #7: *Produce an annual report for BSB no later than March 1st.*

This deliverable was met for the 2016 plan year.

Deliverable #8: *Develop a program evaluation tool with the project sponsor that includes student outcomes, public participation in stormwater education events, and attitudinal surveys regarding storm water issues.*

The Cfwep.Org program has developed the student evaluation tools, including the attitudinal surveys. Generally, students are leaving the events with stronger understanding about what happens to stormwater, the importance of keeping only rain in the drains, and a general understanding that each person is contributing to stormwater pollution. Cfwep.Org staff members are finishing compilation and analysis of the 2015-16 school year data and will report those to BSB as soon as available. This past permit year, volunteers were also surveyed regarding how to make the Clean Up Blacktail Creek event run more smoothly. Cfwep.Org staff will report those findings when analysis is complete.

Review of recommended tasks for 2016 Permit Year:

1) **Continue with the efforts by students to mark drains with the permanent steel markers.** This task was completed for 2016. In addition to the steel markers, local artists have develop a stencil design for consideration by the BSB and Cfwep.Org team. Although the stencil is less permanent, it may be beneficial for use in high traffic areas that demand more visibility.

2) **Increase the number of drains marked by the Stormwater Public Art group to at least ten drains this summer.** The team opted to design and implement one high quality piece for the festivals rather than diluting the message throughout the festival area.

3) **Work with Butte Silver Bow to identify additional signal boxes for stormwater messaging.** This task is on-going. The team has identified four additional targets and is currently seeking additional funding/sponsorship and artwork for the boxes.

4) **Grow the CUBS day to include more students and possibly extend the clean-up effort to areas of Silver Bow Creek.** This task was completed for 2016.

5) **Coordinate with BSB and WET to compete Contractor's Trainings in 2016.** This task was completed for 2016.

6) **Ensure timely, quality communication between BSB, Cfwep.Org, and other partners.** Progress on-going.

7) **Revisit the idea of creating informational signage about stormwater for trailways.** The team tabled this idea in 2016 in order to focus on direct public outreach events such as the CUBS day.

8) **Review targeted education and outreach planning with BSB managers to identify high priority targets for outreach.** Progress on-going. BSB and Cfwep.Org continue to evaluate efficacy of outreach efforts and are working to develop a consistent plan for training.

Recommended Tasks for 2017 Permit Year

1) **Review efficacy of media approaches and determine cost/benefit for TV and Radio Commercials.**

2) **Continue mapping and marking efforts with local schools.**

3) **Complete signal box wraps in summer of 2017 and include sponsorship by local businesses.**

4) **Complete evaluation analysis and report to BSB.**

5) **Plan quarterly meetings with BSB in order to coordinate communications and efforts regarding stormwater education.**

6) **Coordinate with BSB and WET to complete Contractor's Trainings in 2017.**