

## CITY OF LIBBY

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### SPECIAL COUNCIL MEETING #1569

APRIL 22, 2021 @ 2:00PM

COUNCIL CHAMBERS – CITY HALL

#### CALL TO ORDER:

- Pledge of Allegiance
- Roll Call
- Welcome

**NEW BUSINESS:** Each new agenda item will be introduced by the Mayor (or assigned liaison) with a description of the item and explanation for the recommended action. Following council discussion on each item will be an opportunity for public comment prior to any action taken. **Public comment is limited to 3 minutes concerning the agenda item being discussed only.**

1. Allow City Council members an opportunity to review the Surface Water Plan (SWP) with Kristy Kline and discuss the next steps with the plan.

#### GENERAL COMMENTS FROM COUNCIL:

#### ADJOURNMENT:

##### **The manner of Addressing Council:**

Each person, not a Council member shall address the Council, at the time designated in the agenda or as directed by the Council, by stepping to the podium or microphone, giving that person's name and address in an audible tone of voice for the record, unless further time is granted by the Council, **shall limit the address to the Council to three minutes.**

All remarks shall be addressed to the Council as a body and not to any member of the Council or Staff.

No personal remarks shall be addressed to the Council as a body and not to any member of the Council or Staff.

No person, other than the Council and the person having the floor, shall be permitted to enter any discussion either directly or through a member of the Council, without the permission of the Presiding Officer. Any person making personal, impertinent, or slanderous remarks or who shall become boisterous or disruptive during the council meeting shall be forthwith barred from further presentation to the council by the presiding officer unless permission to continue by granted by a majority vote of the council.

ATTENTION: To access this meeting electronically with ZOOM,

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Posted: 4/20/21

**SOURCE WATER  
PROTECTION PLAN**

***City of Libby***  
***Public Water Supply***

**PWSID # MT0000274**

**March 2021**

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## Executive Summary

Source Water Protection (SWP) planning process focuses on the water supply source for a public water system. The City of Libby is a community that is located in Lincoln County in northwestern Montana within the Kootenai National Forest and Cabinet Mountain Range. The City of Libby obtains their public water supply from the Flower Creek Reservoir that lies within the Kootenai National Forest. With several projects proposed within the source water protection areas around the Flower Creek reservoir, the City of Libby Public Water System was concerned about maintaining protection of the city's source water. In early spring of 2020, the City of Libby's City Administrator contacted Kristi Kline, Source Water Protection Specialist with Montana Rural Water Systems, Inc., to provide assistance in updating the 2000 Source Water Delineation and Assessment Report (SWDAR) and facilitating the development of a source water protection plan for the City of Libby.

The City of Libby SWP areas includes federal land (Kootenai National Forest), non-federal land (MT DNRC) and approximately 80 acres that is owned by the City of Libby. The City of Libby leases approximately 26 acres of their 80 acres (an area above the Flower Creek reservoir) to the Kootenai Cross Country Ski Club (KCCSC). Supporting, maintaining and protecting the health of this watershed to provide potable drinking water, healthy forests, wildlife habitat and recreation are goals shared by all stakeholders. To achieve these goals, developing and implementing a source water protection plan is a step in achieving these goals.

To begin a collaborative planning direction to develop a source water plan, area stakeholders were invited to participate in the process of updating the 2000 SWDAR document. This document was completed August 2000 by Russell Levens, Hydrologist, with the Montana Department of Environmental Quality (DEQ). The 2000 SWDAR contains the delineation of the source water protection areas; described the land uses, activities and management practices and assessed the susceptibility of contaminants that could reach the City of Libby's source water in 2000. On-site tours of the Flower Creek Watershed were conducted in the summer of 2020 as the initial start to update the SWDAR. These tours were led by the City of Libby public works staff, USFS staff and KCCSC members to provide stakeholders an opportunity to understand the public water system's strengths and challenges and view current projects that have been completed or installed within the SWP area. The updated 2020/2021 SWDAR information was used as the technical basis to develop the 2021 Source Water Protection plan.

The goal of SWP planning is to identify what protective barriers are already in place, strive to establish new or support existing collaborations with various entities and then work together to incorporate management strategies to reach a common goal of protecting the community's source water. The SWP plan also includes a contingency response plan to address communication and coordination efforts to deal with potential water loss or shortage events.

This project was completed as a group effort among a planning committee consisting of several stakeholders. Kristi Kline, SWP Specialist, Montana Rural Water Systems, Inc. prepared and completed the 2020/2021 updated SWDAR and 2021 SWP Plan.

The 2021 SWP planning team members included:

**City of Libby**

Brent Teske, Mayor  
Jim Hammons, City Administrator  
Peggy Williams, Council member

Jeff Haugen, PWS Operator  
Robert Salter, PWS Operator  
Kenny Rayome, PWS Operator

**Lincoln County**

Brent Teske, Disaster and Emergency Services, Coordinator  
Jennifer Nelson, County Forester

**Kootenai Cross Country Ski Club, Inc (KCCSC)**

Tony Petrusha  
Ben Scott

**USFS Kootenai National Forest**

Nate Gassmann, District Ranger

***Public Water Supply Sources***

The City of Libby Public Water System (PWS) source water is from a diversion dam on Flower Creek which flows out of the Cabinet Mountains Wilderness Area southwest of Libby. Flower Creek is in the Upper Kootenai Watershed (HUC #17010101130). The Flower Creek Municipal Source Watershed covers approximately 16 square miles of mostly forested land, owned by USFS Kootenai National Forest, upstream from Libby's water intake. The Flower Creek Dam was originally built in 1945 by the Mountain States Power Company as the water supply reservoir for the City of Libby. In 1954, Pacific Power and Light assumed ownership and operated the Dam until it was sold in 1986 to the City of Libby. Replacement of the Flower Creek Dam was undertaken in 2014 and completed in 2016.

***Water Quality***

This high mountain source water maintains a low concentration of dissolved constituents and exhibits consistent cold temperatures, both of which can be challenging properties for the coagulation and flocculation chemical treatment processes used by the Libby Water Treatment Plant (WTP). Turbidity in the source water, as the result of erosion along the stream banks, annual spring runoffs or a large rain event in the watershed can overwhelm the WTP's capacity to filter the water. In 2012, the City of Libby WTP was required to issue a health advisory due to the inability to meet the MT DEQ regulatory standards for filtration due to a large volume of sediment released from the old dam. Additionally, a boil order was issued in 2015 and a health advisory issued again in 2016. Both of these incidents were due to large rain events with high levels of sediment and turbidity in Flower Creek. Treatment challenges still exist today and require the Public Water System Operators to stay on high alert as each situation may require varying adjustments to specific treatment operations to maintain regulation compliance.

## ***Risks – Surface Water***

An updated inventory was completed of the SWP *Watershed Region* and *Spill Response/Control Zone*. On-site field tours conducted from June–September 2020 aided the evaluation. Majority of the recharge to the Flower Creek Reservoir is through precipitation (snowmelt and rain) from the Cabinet Mountain Wilderness Area. Seasonal runoff from land slope and elevation throughout the Flower Creek Watershed and within the SWP Spill Response/Control Zone contribute to drainage flowing towards Flower Creek Reservoir and downstream Flower Creek.

Issues of concern identified for the SWP Spill Response/Control Zone and SWP Watershed Region remain the same as 2000, **potential sediment loading, runoff, erosion and wildfire events within the SWP areas**. All have the potential to contribute to source water quality and turbidity issues which present a challenge for the City of Libby's Water Treatment Plant to address. These challenging impacts may require future upgrades to maintain EPA Safe Drinking Water Act Regulations.

There are several changes that have occurred to land uses in the SWP areas in the 2020 review. The KCCSC has installed new buildings (storage and operational), widened trails and added a Biathlon course. New projects being proposed include hosting more winter events, adding larger summer events, adding additional parking to accommodate event traffic and a collaboration to connect the cross-country ski trails with the Greater Libby Area Trails Project. These projects suggest an increase in the density (amount of people and associated increase in vehicle traffic), and the duration of use (year-round) which may impact the source water quality and challenges for the Libby WTP. Additionally, future growth potential brings the possibility of residential developments (with on-site systems) moving closer to the SWP areas.

Wildfires are a continuing concern that range from direct effects to the source water delivery system to long term alterations of the watershed. The topography near Flower Creek Reservoir and along Flower Creek contain varying areas of steep banks and canyons which have the potential to move large amounts of suspended and dissolved material. Additionally, source water quality could be altered from any of these land changes requiring additional operational treatment processes for the City of Libby Water Treatment Plant.

## ***Future Supply***

The Flower Creek Dam and Reservoir is currently the only source water for the City of Libby. Loss of this source water would result in a critical threshold for the City's livelihood. To maintain a safe and reliable water supply for the future of the community, replacement of the Flower Creek Dam was undertaken in 2014 and completed in 2016.

A city ordinance is currently in place that prevents the installation of wells and the use of groundwater within city limits due to a contamination plume from the 1986 Libby Groundwater Superfund Site. Recent monitoring tests in 2020 have indicated that this plume is expanding so these restrictions will continue to stay in place.

As the City of Libby's public water system is currently meeting the summer and winter population demands, the population served has expanded to include residents outside the city

limits. The area has experienced an expansion as a retirement community and economic trends are developing to attract more tourism to the area through outdoor recreation opportunities. Potential residential areas (with on-site septic systems) may be developed in locations that are closer to the SWP areas. The City's water rights were updated to include a storage water right in conjunction with the 2016 Flower Creek Reservoir Dam construction project. The increased water right volume accounts for existing and potential growth within the water service area projected through the year 2040.

The Libby Growth Policy, adopted in 2010, was developed as a guide for future growth in the City. Stated within the Natural Resources section Goals and Action Plan, preserving and protecting the City's water supply was listed as the first of seven goals.

### ***Implementation***

As source water protection is an ongoing effort, extending for the life of the water source, an active participation and communication effort by the **City of Libby, USFS, DNRC and all stakeholders** are important roles to be continued in the future.

The 2020 SWP Plan includes implementation tables that summarizes the management and contingency response action items developed by the Libby SWP Planning committee, identifies the responsible parties tasked with working on these management ideas and proposes a timeline for each action item to reach completion.

To maintain an active participation and communication of protecting the City of Libby's source water, an annual review of the 2021 SWP activities should be completed. This review, by the **City of Libby Public Works staff, Council members and SWP planning committee**, will include the evaluation of the multi-barrier SWP management planning strategies, effectiveness of completed and implemented action items and future goals.

Emergency contact information is important information that will be updated yearly along with any changes in land uses or new potential contaminant sources. A complete evaluation will be completed by the **Libby SWP Planning committee** every five (5) years to include updated inventories and re-evaluate management planning strategies, and future goals to protect the PWS source supplies.

The *City of Libby Source Water Protection Plan* is intended to be a *living document* designed to assist the City and watershed stakeholders in their efforts to maintain and improve the watershed. As the City of Libby remains committed to provide safe and reliable water services to support their community and future growth, the 2021 SWP plan assists in that effort by actively working towards solutions to reduce impacts to the source water.

**Source Water Protection Plan Mission statement**

*Provide clean, safe, affordable drinking water to Libby residents and visitors by protecting the City's source water*

**Source Water Protection Plan Goal**

*Reduce sediment and turbidity in the Flower Creek source water*

**Priority Ranking of Goal and Objectives**

<b>Goal</b>	<b>Objectives</b>	<b>Priority Ranking</b>
<i>Reduce sediment and turbidity in the Flower Creek source water</i>	<b>(1) Identify potential runoff and sediment sources in SWP areas</b>	1
	<b>(2) Mitigation of runoff and movement of sediment reaching Flower Creek source water</b>	1
	<b>(3) Implementation of fire protection barriers and mitigation of post-fire issues in SWP areas</b>	1



## Objective (1)

Identify runoff and sediment sources in the City of Libby SWP areas

**Spill Response/Control Zone** - This area is defined as all surface waters and land within one-half mile around the Flower Creek Reservoir and Flower Creek.

**SWP Watershed Region** - all land within the topographic boundaries of the Flower Creek drainage basin.

Majority of the recharge to the Flower Creek Reservoir is through precipitation (snowmelt and rain) from the Cabinet Mountain Wilderness Area. Seasonal runoff from land slope and elevation throughout the Flower Creek Watershed and within the SWP Spill Response/Control Zone contribute to drainage flowing towards Flower Creek Reservoir and downstream Flower Creek.

Objective	Action Item	Stakeholders	Participants	Schedule	Indicators
Identify land uses and potential sediment sources in <b>Spill Response/Control Zone</b>	Conduct on-site tours of SWP area	City of Libby USFS, DNRC, KCCSC	Staff with City of Libby USFS DNRC KCCSC members	Completed Summer/Fall 2020	Updated 2020/2021 SWDAR report
Identify land uses and potential sediment sources in <b>Watershed Region</b>	Conduct on-site tours of SWP area	City of Libby USFS, DNRC, KCCSC	Staff with City of Libby USFS DNRC KCCSC members	Completed September 2020	Updated 2020/2021 SWDAR report
Document sources	Review by SWP planning committee	City of Libby USFS, DNRC, KCCSC	SWP Planning committee members	Completed December 2020	Updated 2020/2021 SWDAR report

## Objective (2)

Mitigation of runoff and movement of sediment reaching Flower Creek source water

Working collaboratively towards solutions to reduce impacts to the source water.

Identified Source	Action Item(s)	Stakeholders	Responsible Party	Proposed Schedule	Indicators
<b>Spill Response/Control Zone</b>					
Natural runoff in Flower Creek Watershed	<b>Conduct Watershed Hydrology study</b> on runoff patterns in SWP areas	City of Libby PWS Customers Kootenai USFS KCCSC	City of Libby City Contract Engineer KCCSC Kootenai USFS	Summer 2021	
Topography, historic channel alteration, and riparian logging between Upper and Lower Reservoir on Flower Creek	Review 2009 <b>In-stream channel mitigation project</b> proposal Research grant funding	City of Libby PWS customers Kootenai USFS	City of Libby Kootenai USFS MT DNRC BLM Libby Dam COE	Summer 2021	
Upper and Lower Reservoir Operations	(1) Develop <b>drawdown plan</b> for inspection (2) Maintain water quality monitoring	City of Libby PWS Customers  Kootenai USFS MT DNRC	City of Libby	Summer 2021	
Flower Creek Dam (1) Access Road (2) Dam site riprapped bank	(1) implement <b>erosion controls</b> on access road (2) Engineered plans to <b>improve side bank stability</b> (3) <b>Coordinate with Watershed Hydrology study</b>	City of Libby PWS customers	City of Libby City Contract Engineer	Fall 2021	
2016 Construction Site Spoil Pile (Proposed parking lot site)	(1) <b>Incorporate spoils</b> with Road #128 project (2) <b>P.E. site evaluation</b> and assessment for future use (3) <b>Coordinate with Watershed Hydrology study</b>	City of Libby PWS Customers Libby community	City of Libby City Contract Engineer Lincoln County Road Dept.	Summer 2021	

Proposed project on Flower Creek Road #128	(1) <b>Incorporate spoil pile</b> in road construction project (2) Research non-impervious material (3) Design to accommodate seasonal runoff (4) <b>Coordinate with Watershed Hydrology study</b>	City of Libby PWS Customers KCCSC Area residents and visitors	City of Libby Lincoln County Road Dept. City Contract Engineer	Part 1- Road Work - Summer 2021 Part 2 – Paving Summer 2022	
KCCSC Operations	(1) Submit year-round <b>Operational Master Plan</b> (2) <b>Plan review</b> by City Council	City of Libby PWS Customers KCCSC Area residents and visitors	KCCSC Libby City Council	Summer 2021	
KCCSC Infrastructure	(1) <b>Develop site maps:</b> ski trails, culvert system (2) <b>Coordinate with Watershed Hydrology study P.E. evaluation of culvert system</b> (3) <b>Develop Site Maintenance Plan</b>	City of Libby PWS Customers KCCSC	KCCSC City of Libby City Contract engineer	Summer 2021	
<b>WATERSHED REGION</b>					
Watershed logging operations/project areas	Maintain communication of SWP objectives in USFS Long-range planning; Annual review of WTP data & monitor for potential impacts in SWP areas	City of Libby PWS Customers KCCSC Area residents and visitors Kootenai USFS MT DNRC	City of Libby Kootenai USFS MT DNRC KCCSC	Semi-Annual/Annual and Long-Range Planning meetings	
Watershed transportation system	Monitor and evaluate system for impacts	City of Libby PWS Customers Area residents and visitors	Kootenai USFS MT DNRC City of Libby	Annual reports	

### Objective (3)

Implementation of fire protection barriers and mitigation of post-fire events in the SWP areas

Barriers and Mitigation Efforts	Action Items	Stakeholders	Responsible Party	Proposed Schedule	Indicators
Fuel Reduction Projects	Continue to monitor forest health and implement projects to reduce chance of crown fire	City of Libby PWS customers Kootenai USFS MT DNRC KCCSC Area residents and visitors	City of Libby Kootenai USFS MT DNRC	Completed projects  On-going	2018 Fire Wise Project MT DNRC project Various USFS projects
Logging/Timber Projects	Continue monitoring projects and ensuring SWP objectives are met	City of Libby PWS Customers KCCSC Area residents and visitors	Kootenai USFS MT DNRC City of Libby KCCSC	On-going	
Monitoring in SWP areas	Install remote weather stations; rain gauges sites; review WTP water quality data; receive fire watch notifications; install protective security infrastructure	City of Libby PWS Customers Kootenai USFS MT DNRC KCCSC Area residents and visitors	City of Libby Kootenai USFS MT DNRC KCCSC	On-going	
Emergency and Post-fire Response Plans	Develop a fire recovery response plan Annual review with collaborative partners; Coordinate resources; Develop/update mitigation strategies to increase WTP resistance and recovery	City of Libby PWS Customers Kootenai USFS MT DNRC KCCSC Area residents and visitors	City of Libby Kootenai USFS MT DNRC KCCSC	Completed  Update yearly	Libby ERP and Contingency Plan

## MANAGEMENT PLANNING

The goal of source water management strategies is to protect the City of Libby PWS source water by managing identified potential contaminant sources in the *Spill Response/Control Zone* and ensuring land use activities pose minimal threats to the source water within the *Watershed Region*. The 2000 SWDAR identifies these regions to include:

***SWP Spill Response/Control Zone*** - the area closest to the source water, Flower Creek Reservoir and Flower Creek. This area is defined as *all surface waters and land within one-half mile around the source water reservoir*.

This area has three landowners: USFS Kootenai National Forest, a small portion of land owned by MT DNRC and approximately 80 acres that is owned by the City of Libby. The City of Libby has maintained a lease for 28 acres with the KCCSC for several years.

***SWP Watershed Region*** - all land within the topographic boundaries of the Flower Creek drainage basin.

USFS Kootenai National Forest and MT DNRC are the two land owners in this region.

Majority of the recharge to the Flower Creek Reservoir is through precipitation (snowmelt and rain) from the Cabinet Mountains. Seasonal runoff from land slope and elevation throughout the Flower Creek Watershed and within the SWP Spill Response/Control Zone contribute to drainage flowing towards Flower Creek Reservoir and downstream Flower Creek.

The majority of the land in these SWP areas are mixed forest dominated by evergreens. Grassland, meadows, shrubs and rock or barren land make up a smaller percentage of land cover. Loss of forest covers due to wildfires; logging operations or land development could introduce contaminants to the area and impact the City of Libby's source water. Gravel, sand, silt, and clay deposited as alpine glacial moraine and alluvial deposits mantle the bedrock along Flower Creek. The topography in the Flower Creek Watershed contains areas of steep banks and canyons which could move large amounts of suspended and dissolved material into Flower Creek Reservoir.

Issues of concern identified were **potential sediment loading, runoff, erosion and wildfire events within the SWP areas**. There are proposed changes to increase outdoor recreation opportunities surrounding the Libby area that would include both the SWP Spill Response/Control Zone and Watershed Region. Management strategies in both of these Regions must include a multi-barrier approaches that build partnerships with customers, community members and stakeholders to work collaboratively to develop and implement working solutions.

## **Stakeholders and Partnerships**

All entities involved hold the Flower Creek Watershed as an important viable resource to be protected

### ***City of Libby (Landowner)***

The City of Libby owns and manages the diversion dam and upper and lower reservoir on Flower Creek that supplies their municipal drinking water source. Source water is piped to the City's water treatment facility (WTF) which operates year-round to supply potable drinking water to their customers.

### ***Kootenai National Forest (Landowner)***

The Flower Creek Watershed is located within the Kootenai National Forest which is managed by the Libby Ranger District staff. Management priorities are to maintain and improve the health, diversity, and productivity of the forest ecosystems in compliance with the Clean Water Act.

### ***Montana Department of Natural Resources and Conservation (Landowner)***

The MT DNRC Libby Unit of the DNRC Trust Land Management Division, Forest Management Bureau manages timber sales and maintains forest inventory, improvements and resources management for healthy and diverse forest within the Flower Creek Watershed.

### ***Kootenai Cross Country Ski Club, Inc. (KCCSC) (Leases 28 acres of City property)***

KCCSC has operated ski trails for public use since the late 1980s. Management is provided by volunteers that organize lessons, youth programs and various events. A Biathlon course was added in 2017.

### ***Lincoln County***

#### ***Emergency Management Agency (EMA)***

EMA is responsible for planning, coordinating mitigation, preparedness, response and recovery activities related to natural and man-made disasters in Lincoln County.

#### ***FireSafe Council***

A nonprofit group that provides technical assistance and resource material to citizens of Lincoln County for wildfire assessment and risk protection and collaborates with local, state, and federal agencies on forest projects

#### ***Road Department***

Department maintains roads, performs winter maintenance and develops special projects for the Libby District of Lincoln County.

### ***Libby Outdoor Recreation Association (LORA)***

Non-profit group of community members working on the Greater Libby Area Trails Plan, a plan to develop recreational opportunities pertaining to trail use and development in and near the City of Libby.

### ***Area community and visitors***

Potable drinking water is supplied by the City of Libby and available for the public's use. Outdoor recreation in the Flower Creek watershed is available year-round. Various trails are available within the watershed that can be accessed by walking, biking or horseback. Flower Creek Road provides passage for vehicle travel through the watershed.

## **SOURCE WATER PROTECTION MANAGEMENT COLLABORATIVE PLANNING**

The goal of source water management strategies is to protect the City of Libby PWS source water by managing identified potential contaminant sources in the ***Spill Response/Control Zone*** and ensuring land use activities pose minimal threats to the source water within the ***Watershed Region***.

### **Source Water Protection Plan Mission statement**

*Provide clean, safe, affordable drinking water to Libby residents and visitors by protecting the City's source water*

### **Source Water Protection Plan Goal**

*Reduce sediment and turbidity in the Flower Creek source water*

As the Flower Creek Reservoir is the City's only source water, protection of the municipal watershed and water quality are important issues of concern for the City of Libby. Implementing the management strategies to reduce and mitigate these issues requires a collaboration from all stakeholders. Mitigating these issues will assist in meeting the SWP Mission statement to reduce costs for water treatment operations and also for rate payers. To address the protection goal, associated objectives, action items, responsible parties and indicators of success are defined.

### **Public Outreach – General SWP Management**

A powerful tool to carry the message of source water protection is public outreach. Each objective will include one or several types of outreach modes as an additional action item. Examples of outreach modes include:

- Website links -
  - o <https://cityoflibby.com>
    - SWP Plan message-engage and empower community
    - Water conservation tips
    - Flower Creek water quality information
  - o <http://www.lincolncountymt.us/departments/health-department>
  - o <http://www.lincolncountymt.us/ema-home>
  - o Kootenai USFS
  - o Kootenai Cross Country Ski Club, Inc.
- Social media
  - o Lincoln County EMA Facebook page

#### Print media

- *local* newspapers

#### Public meetings

## *Objective (1)*

### **Identify runoff and sediment sources in SWP areas**

Majority of the recharge to the Flower Creek Reservoir is through precipitation (snowmelt and rain) from the Cabinet Mountains. Seasonal runoff from land slope and elevation throughout the Flower Creek Watershed and within the SWP Spill Response/Control Zone contribute to drainage flowing towards Flower Creek Reservoir and downstream Flower Creek.

Existing land slope, soils, vegetation and changes to the landscape within the SWP areas determine how runoff moves through or is held within the subsurface. Projects or events within the Spill Response/Control Zone that alter land slope, vegetation, soil and subsurface properties all have the potential to impact the characteristics of runoff volume and intensity.

Topography near Flower Creek Reservoir and along Flower Creek contain varying areas of steep banks and canyons which also contribute to the potential to move large amounts of suspended and dissolved material.

#### **Identified potential sources in SWP Spill Response/Control Zone**

- Natural seasonal runoff in Flower Creek Watershed
- Topography (land slope, soils and elevation), historic channel alteration and riparian logging of SWP areas
  - o Between Upper and Lower Reservoir on Flower Creek
- Flower Creek Dam road access site and riprapped Dam side bank
- 2016 Construction Spoil Pile site and proposed parking lot area
- Proposed widening and paving project for section of Road #128
- Kootenai Cross Country Ski Club, Inc. (KCCSC)
  - o Seasonal Operations (Density and duration increases)
  - o Infrastructure
- Potential wildfire events in SWP Spill Response/Control Zone

#### **Identified potential sources in SWP Watershed Region**

- USFS contracted timber and other logging projects
- DNRC contracted timber and other logging projects
- Potential wildfire events
  - o Cabinet Mountains Wilderness Area – Flower Creek Recharge area
  - o Upper Kootenai Watershed (HUC #17010101130) – Flower Creek
  - o Adjoining forest land area
- Watershed transportation system

### **Potential Source Information**

#### **Flower Creek Watershed seasonal runoff**

Precipitation from snow and rain events along with snowmelt from high elevation storage, contribute to the large amount of annual seasonal runoff for this Watershed.



### Flower Creek

- Between Upper and Lower Reservoir

Natural runoff and steep topography between the Upper and Lower Reservoir may contribute to erosion reaching Flower Creek. Larger cut banks with eroding slope toes, altered channel, floodplain and associated riparian areas are present ½ mile below the Upper Reservoir.

- Upper and Lower Reservoir Operation

Inorganic sediment may settle behind the Upper Reservoir outlet gate and have potential for downstream transport to Flower Creek and Lower Reservoir.

### Flower Creek Dam Access Road site and bank

Runoff channels are appearing along the new access road leading down to the dam site and erosion issues are appearing from exposed areas on the riprapped contoured bankside of the dam. A majority of the 2016 construction spoil pile remains at the temporary construction landing site above Flower Creek along Road #128.

### 2016 Construction Spoil Pile site and Proposed future parking lot area

This area, above Flower Creek, was developed as a temporary site during the 2016 re-construction of Flower Creek Dam and currently stores the leftover construction spoil pile.

A parking lot proposal from the KCCSC in conjunction with Libby Outdoor Recreation Association (LORA) has been discussed. No site assessment has been completed for use as a parking lot. The potential parking area is proposed to accommodate more vehicle traffic for future expansion of activities and various trail-head use within the Flower Creek Watershed. Included in the discussion of this proposal is the possibility to accommodate transport buses and allowance for turn-arounds in this area.

### Proposed widening and paving project for Road #128

Access to the Flower Creek Watershed including the Flower Creek Reservoir/Dam and KCCSC is via Flower Creek Road #128. Deterioration of the road surfaces often appears in the lower 1-2 miles of Road #128. Improper road culvert operation and drainage issues have resulted in ponding and road saturated sections along the road length.

In 2019, the USFS granted the City of Libby an easement for a project to widen and pave Road #128 from the intersection with Granite Creek Road #618 to the KCCSC entrance. The City has proposed to use the leftover spoil pile from the 2016 Dam Construction Project in the road widening project. The USFS has implemented a road restriction for *motorized* vehicles from April through May 31 each year at the intersection with Granite Creek Road #618 and Road #128. *Non-motorized* traffic is allowed year-round.

### Kootenai Cross Country Ski Club, Inc (KCCSC) Lease Agreement with City of Libby

The KCCSC is located directly above the Flower Creek Dam, reservoir and Flower Creek. Through the *lease agreement*, the City has the direct management to implement SWP protection strategies for this development.

KCCSC's future operations are proposed to be different from past years operations. A draft operational master plan addressing proposed changes was being drafted by KCCSC in the fall of 2020. Review of this operational plan by the City Council, may require additional SWP management strategies to be added. Proposed changes suggest an increase in density (the amount of people and vehicles) and the duration of use (year-round) which may potentially impact the load on the watershed and lead to source water quality issues.

### **KCCSC Infrastructure (on City property)**

#### Cross-Country Ski Trails

Operational changes for KCCSC have led to changes on the property that include widened ski trails, and installation of new and/or modifications to existing drainage culverts. Natural drainage pattern of area runoff has been disrupted or re-directed. Operation and flow of culvert drains on property needs to be determined. Surface drainage appears to flow towards Flower Creek Dam access road area. Land slope and loss of topsoil from these projects has hindered regrowth in some areas. Operational changes are proposed that would increase year-round events and attendees which may add to erosion and runoff issues.

#### Biathlon Shooting Range and Judge's Scoring Building

A Biathlon Shooting range was installed in 2017. Land slope and sloughing of the bank hillside above the shooting range was evident during the 2020 on-site tours. No lead abatement plan is in place at this time. Operation and flow of culvert drains in this area needs to be determined.

#### Warming/Equipment Building (aka Multi-Purpose Building)

This building was constructed in 2020 which serves to store KCCSC equipment (snow grooming machine, etc.) and as a gathering area for the public. Floor drains are not operational in this building. Higher elevation surface runoff resulted in ponded water near the building during on-site tours in 2020. Operation and flow of existing culvert drains around this building needs to be determined. Surface drainage from this area appears to flow towards Flower Creek Dam access road area.

### **Vaulted Toilet(s)**

A USFS vaulted toilet used by KCCSC for many years has been re-located from adjacent USFS land and installed on City of Libby property near the Biathlon range and Scorer's Booth. An additional vaulted toilet, proposed to be handicap accessible, is proposed to be located near the Warming/Equipment building.

### **SWP Watershed Region**

#### **USFS and DNRC Logging Operations**

Logging operations on USFS and DNRC lands are conducted by private contractors. Heavy duty truck traffic during contact hauling may impact roads and culvert operations. Erosion and sediment movement may occur as a result of logging projects and areas may be further impacted by seasonal runoff events.

#### **Potential Wildfire events in SWP areas, Watershed and Recharge areas**

Wildfires can be caused by nature (lightning), human carelessness or arson. Potential degradation of the source water quality may occur that may have lasting effects for several years. Post-fire issues such as flash flooding and mudslides may also cause water quality issues and may be more detrimental to water operations than the actual fire. An increase in sediments and nutrients can lead to high turbidity levels, algal blooms, taste and odor issues and possibly reduce the Flower Creek reservoir capacity.

#### **Transportation System**

The Kootenai National Forest and Cabinet Mountain Wilderness have a network of multi-use trails and road system. High traffic use occurs in the upper section of Flower Creek #128. Erosion and sediment movement may occur from these transportation networks and areas may be further impacted by seasonal runoff events.

## *Objective (2)*

### Mitigation of runoff and movement of sediment reaching Flower Creek sources

**Source Water Protection Management Strategy Descriptions - Action Item description and Responsible party is listed**

#### **SWP Spill Response/Control Zone**

##### Flower Creek Watershed seasonal runoff

**Action Items: City of Libby, KCCSC, City Contract Engineer and Kootenai USFS**

Conduct **Watershed Hydrology and runoff study** in SWP areas to determine direction of flow

- a. 80 acres of City Property - includes 26 acres leased to KCCSC
- b. Evaluate stormwater flows above and below Flower Creek Dam
- c. Collaborate with USFS and DNRC hydrology staff on available data
  - o Initiate in Summer 2021

##### Flower Creek topography

###### Between Upper and Lower Reservoir

**Action Items: Kootenai USFS, City of Libby and DNRC**

- Review **2009 in-stream channel stabilization project** to address a section of Flower Creek. The specific section is located ½ mile below the Upper Reservoir where larger cut banks with eroding slope toes are present.
- Research current **grant funding and resource availability**
- Research potential stream bank stabilization project sites

###### Upper and Lower Reservoir Operation

**Action Items: City of Libby Public Works**

- Develop a **drawdown plan (flood mitigation) from Flower Creek Dam to Flower Creek** to investigate and mitigate potential sediment collection. Develop a yearly drawdown maintenance plan
- Possible collaboration of ideas and assistance from Libby Dam Corp of Engineers (COE).
- **Maintain water quality monitoring** for continuous data collection.

##### Flower Creek Dam Access Road site and Dam riprapped side bank

**Action Items: City of Libby Public Works and Road Department, City Council and Contract Engineer**

- Develop **mitigation plan for erosion channels along access road**; clean out ditches – **Coordinate this site with Watershed Hydrology and runoff study**
  - o Fall 2021
- Develop **plan to stabilize riprapped contoured bank** of dam
  - o Fall 2021

2016 Construction Spoil Pile site

**Action Items: City of Libby Public Works and Road Department and City Council**

- Implement plan to **incorporate spoil pile** with Flower Creek Road #128 re-construction
  - o **Coordination with Lincoln County Road Department**
    - Summer 2021

Proposed Public Parking Lot area (site currently storing the Construction Spoil Pile)

**Action Items: City of Libby; City Contract Engineer; KCCSC and LORA members**

**Site has not been evaluated for use as a parking area**

- Complete an engineered evaluation of site:
  - o **Coordinate with Watershed Hydrology and runoff study**
    - Evaluate area drainage
  - o Determine impacts from surface area disturbance and runoff potential
  - o Determine soil conditions, compaction, stability and load limits
  - o Determine site limitations on lot size and drainage impacts
  - o Evaluate alternatives to use of impervious surfaces (pavement) in area

Proposed widening and paving project for Road #128

**Action Items: City of Libby Public Works staff and City Council; Lincoln County Road Department, USFS staff and KCCSC members**

- Evaluate spring runoff conditions and impact on road system
- **Coordinate with Watershed Hydrology and runoff study**
  - o Inspect Flower Creek Road #128 culvert operation to handle stormflows and load limits
  - o Part 1 Road Work – Proposed - Summer 2021
    - **Coordinate incorporation of City of Libby spoil pile material** in road project
  - o Research alternative impervious road surface material
  - o Part 2 – Paving – Proposed - Summer 2022
  - o Conduct annual evaluation of seasonal road maintenance operations
    - snow plowing and/or road grading
  - o Implement weed control plan and proper chemical application along road re-construction project

Kootenai Cross Country Ski Club, Inc. (KCCSC) (2018-2028 lease with City of Libby)

**Action items: KCCSC submits to Libby City Council for review**

**Develop KCCSC Operational Master Plan** – short-term plans and long-term goals

- Plan should implement proper management that addresses sediment concerns
- **Outline/checklist of the Operational Master Plan should include:**
  - o An overall **site map** of entrance, ski trails, buildings, Biathlon area, vaulted toilet(s)
  - o Overall **site maintenance plan**
  - o **Description of proposed Seasons of Use/Activity**
    - i.e., Biathlon events (i.e., Jan-Feb); cross country use/events (i.e., Nov-March), off-season use (i.e., March-October)
    - Size of potential events (minimum – maximum)
    - Expected number of contestants **and** spectators
    - additional event equipment needs (i.e., port-a-potties)
    - Time interval of competition/events (weekly/monthly etc.)
- Timely submittals of proposed projects to the City Council for review
  - o Reviews may require monthly, quarterly, semi-annual and annual time-lines

**KCCSC Infrastructure (on City property)**

**Responsible Party: KCCSC and City of Libby**

Cross-Country Ski Trails

**Action Item: KCCSC submits to Libby City Council for review**

- Develop a **site map of ski trails**
- Identify site/location of existing installed culverts and bio swales on property
- **Professional engineer evaluation** of existing road/ski trails and drainage infrastructure
  - **Coordinate with Watershed hydrology study**
  - Determine correct culvert pipe size and placement
- Develop, implement and maintain a **Re-vegetation Plan** – Land slope and loss of topsoil has hindered regrowth in some areas
- Provide a year-round **Maintenance Plan** for use of ski trails
- Implement a noxious **weed management plan** (licensed applicator)

Biathlon Shooting Range and Judge's Scoring Building

**Action Item: KCCSC submits to Libby City Council for review**

- Develop, implement and maintain a **Re-vegetation Plan** – Land slope and sloughing of bank hillside has hindered regrowth
- Implement a Lead abatement plan

Warming/Equipment Building (aka Multi-Purpose Building)

**Action Item: KCCSC submits to Libby City Council for review:**

- **Outline intended use** for public and/or private use – i.e., time of season, time duration (daily/24 hr.), planned/proposed events
  - o Ensure security of building
  - o Detail maintenance services conducted (i.e., oil changes, repairs, fueling)
    - On-site storage of equipment, fuels, oils – quantity
    - Fluid disposal plan
- **Coordinate with Watershed Hydrology study**
  - o Evaluate drainage operation of installed culverts near and around building
  - o Determine runoff flow direction within building area

Vaulted Toilet(s)

**Action Item: KCCSC submit designs for Libby City Council review**

**Design accurate site location** for unit(s) to

- Ensure no drainage/ponding issues occur around vault housing and access

**SWP Watershed Region**

**Watershed Logging Projects**

**Action Items: City of Libby; Kootenai USFS, MT DNRC and KCCSC**

- Continue to communicate SWP Plan in commercial timber and resource management activities
- Communication and review of yearly operations with USFS, DNRC, City of Libby and KCCSC
  - Timber Operations – Completed and future projects
  - WTP Operations – Water quality report trends and updates
    - Impacts to the source water and SWP areas
  - KCCSC Operations

**Transportation System**

**Action Items: Kootenai USFS and City of Libby**

- USFS conducts annual monitoring and evaluation of network system
- Support trail and road maintenance for erosion control

### *Objective (3)*

#### *Implementation of fire protection barriers and mitigation of potential wildfire and post-fire events in the SWP areas*

With ninety-three percent of the spill response region and eighty-four percent of the watershed region a mixed forest, wildfires continue to be a concern. Wildfires can be caused by nature (lightning), human carelessness or arson. Effects from wildfires range from direct effects to the source water delivery system to long term alterations of the watershed. Loss of forest canopy can lead to increased evaporation and reduction in the amount of water stored in snowpack (recharge source).

Potential degradation of the source water quality may occur that may have lasting effects for several years. Post-fire issues such as flash flooding and mudslides may also cause water quality issues and may be more detrimental to water treatment operations than the actual fire. An increase in sediments and nutrients can lead to high turbidity levels, algal blooms, taste and odor issues and potential loss of the Flower Creek reservoir capacity.

#### **SWP Spill Response/Control Zone and Watershed Region**

##### **Implementation of fire protection barriers**

**Action Item: City of Libby maintain collaboration between all stakeholders for fire protection barriers within the SWP plan.**

##### Fuel reduction projects

Management priorities of the Kootenai USFS and MT DNRC are to maintain and improve the health, diversity and productivity of the forest ecosystems. The City of Libby works collaboratively with the Kootenai USFS, MT DNRC and Lincoln County FireSafe Council on forest health within the 80 acres of City owned property.

The Kootenai USFS, MT DNRC and the City of Libby have completed several fuel reduction projects on land ownership parcels that are within the Source Water Protection areas. In 2020, several fuel reduction projects were in progress or had been completed, that addressed blown down trees from wind events.

##### Contracted Timber Projects

Kootenai USFS and MT DNRC manage commercial thinning projects through private contractors. These agencies have direct oversight on these projects.

##### Emergency Response Plans – all Stakeholders

- Develop plans with intent to coordinate, collaborate and communicate with all stakeholders in the SWP area
  - o List contact information, GIS addresses; outline response actions and roles, list of available resources
- Develop a fire recovery response plan
  - o After-fire erosion issues and plans to reduce/mitigate runoff and erosion



## Monitoring

### **Action Item: City of Libby**

- Set up weather station in SWP areas
  - o Radio controlled/other – transmit data to Libby WTP
    - Rain gauge at various points in SWP areas
  - o Collaboration with other stakeholder on-site data recorders
- Maintain water quality baseline sampling and data collection
  - o i.e., Ash, nutrients, sediment, temperature, etc.
- Communication/collaboration of fire and weather conditions within the Watershed and nearby forest land
  - o Stakeholders
  - o Review hazard vulnerability analysis of SWP area
    - Historical records
      - Frequency and intensity of fires
      - Impacts to Libby WTP
- Maintain security within Libby SWP areas
  - o Flower Creek Dam and Reservoir
    - Fencing
    - Locked entrance for Dam access road and controls
    - Regular inspections around reservoir by WTP staff
    - Camera (motion)

## Mitigation response to post-fire events

### **Action Item: City of Libby maintain collaboration between all stakeholders for mitigation efforts for post-fire response**

(Refer to Contingency Planning Section for more response details)

Develop a post-fire recovery plan for SWP Spill Response/Control Zone and Watershed Region

- Identify mitigation and long-term plans to prevent future damage and increase WTP resistance
- Identify resource needs

#### Coordination

- Monitor watershed conditions for post-fire issues (i.e., flash flooding)
- Identify failure points within Libby WTP delivery infrastructure
- Review culvert operations within Watershed and SWP areas
- Determine runoff points and new collection/ponding areas
- Install/implement erosion control measures that address runoff and sediment movement

#### Communication

- Engage Libby PWS customers and all stakeholders to support and participate in mitigation efforts

## CONTINGENCY PLAN

The City of Libby has evaluated the principal threats to the source water. Those threats have been identified as increased turbidity levels to the Flower Creek Reservoir and Flower Creek source water and wildfire events in the watershed. Increased turbidity levels in the source water require immediate attention by the WTP staff to ensure a potable supply of water is distributed to customers. Wildfire can result in reduced or closed access to Flower Creek Dam and Reservoir, debris clogging situations, future erosion issues, and source water quality issues.

This section designates a Public Water System (PWS) emergency contacts and potential responses in the event that a water shortage or contamination event arises. Another important aspect of this plan is an estimate of the equipment and materials that would be needed in the event of an emergency, and a description of how a short-term replacement water supply would be handled.

This Source Water Protection contingency response planning chapter includes coordinating communication efforts with the City of Libby's staff, City Council, customers, Lincoln County staff, and Kootenai USFS. This collaboration and the following items listed are also important for the implementation of this contingency response plan.

The City of Libby has budgeted contingency funding for public utilities repairs each year. In addition, the City Council is aware of all state and federal funding available through state and federal grants and loans and would apply for available funds for any emergencies. The City Council may further evaluate the need for an Emergency Declaration with assistance from the Lincoln County Emergency Services Agency Director.

### **ACTION ITEMS**

**City of Libby Public Works staff and City Council** will coordinate with **Lincoln County Emergency Management Agency and Public Health Department staff** on contingency planning exercises, Local Emergency Planning Committee (LEPC) activities and any funding opportunities for emergency equipment resources important to this Contingency Response Plan

**City of Libby Public Works staff** will coordinate with **Lincoln County Emergency Management Agency and Kootenai USFS staff** on fire response and assistance for Flower Creek Dam and Reservoir and Flower Creek

**City of Libby City Council** will continue to budget for PWS utility repairs, upgrades and contingency funding yearly

**City of Libby and SWP Planning Committee members** will review the SWP Contingency Plan yearly

**City of Libby Public Works staff** will develop:

- Standard Operating Guidelines (SOGs) for PWS Flower Creek Reservoir and Dam shutdown procedures
- Evaluate emergency thresholds and limits for WTP operations
- Water conservation and/or water restriction guidelines

## Libby SWP Contingency Response Plan

### Action Item Table

ACTION ITEMS	RESPONSIBLE PARTY	TIMELINE	STATUS
Coordinate with Lincoln County EMA and Public Health staff -ERP planning -LEPC meetings -Funding	City of Libby Lincoln County	Monthly meetings Funding cycles	On-going
Coordinate with Lincoln County EMA; Kootenai USFS on fire response planning	City of Libby Lincoln County EMA Kootenai USFS	Yearly	
Budget for PWS repairs and contingency funding	City of Libby	Yearly	On-going
Develop SOGs for Flower Creek Dam and Reservoir shutdown procedures;	City of Libby WTP staff MRWS staff	Summer 2021	
Develop Threshold limits and triggers for PWS water conservation during water shortage events	City of Libby Council and WTP staff	Summer 2021	
Review and update Contingency Plan and action items	City of Libby and SWP planning committee	Yearly	

**March 2021**

**City of Libby Public Water System**  
**SWP Plan Emergency contacts and phone numbers**

CONTACT NAME	TITLE	PHONE	RESPONSIBILITY
Jeff Haugen <i>Emergency Contact</i>	Water Treatment Plant Lead Operator	Office (406) 293-2067  Cell phone (406) 291-1844	Operations and Maintenance of City of Libby Water Treatment Plant
Robert Salter  Kenny Rayome <i>Backup Emergency Contacts</i>	Water Treatment Plant Operators	Cell phone (406) 646-6211  Cell phone (406) 334-6088	Operations and maintenance of City of Libby Water Treatment Plant
Lincoln County Emergency Management Agency  Brent Teske	Director	<b>Office 24/7</b> <b>(406) 293-6295</b>  <i>Sheriff's Office</i> 406-293-4112 ext 0  Cell phone (406) 334-7194	Emergency preparedness, planning and response coordination for Lincoln County
Lincoln County Health Department  Kathi Hooper	Public Health Department Director	Office (406) 283-2440  cell (406) 291-1168	Regulation of Public Health standards in Lincoln County
Montana DES-24/7	Duty Officer	<b>(406) 324-4777</b>	All reportable HazMat spills
DEQ Public Water Supply (M-F) 8am – 5pm	PWS staff	(406) 444-4400	Responds to any event that will pollute surface or ground waters.

March 2021

## **PREVENTION/MITIGATION**

### **Equipment and material resources**

#### **City of Libby**

- Various equipment and spare parts
- SCADA Controls
- Maps
- Emergency Backup Generator (at WTP)
- Cat Backhoe
- 312 Cat Excavator
- Access keys for Flower Creek Dam

#### **Kootenai USFS**

- Staff resources to respond to wildfire events
- Emergency vehicles
  - o Trucks, engines, tenders, command center

#### **Lincoln County**

- Mutual Aid – Coordinated through Lincoln County EMA Director
  - o Mutual Aid
  - o Resource List information
  - o Local Emergency Planning Committee (LEPC) – part of EMA
- Public Health Department
  - o Health Officer and staff
    - Emergency Preparedness Lead; Sanitarian; Nurses
- County Sherriff and staff
  - o Security patrols and evacuations

#### **Other resources**

- Neighborhood Watch – Libby Water Treatment Plant area
- Montana Rural Water Systems, Inc. – (406) 454-1151
- Area Public Water Systems
  - City of Troy – (406) 295-4151
  - City of Whitefish
    - contact Public Works – (406) 863-2451/863-2460
- Laboratory Testing
  - o Montana Environmental Laboratory – Kalispell – (406) 755-2131
  - o MT State Lab Services Bureau-Helena-1-800-821-7284
- Drinking Water Emergency Sampling (DWES) Kit
  - o Notify MT State Lab-Helena-1-800-821-7284 of impending use
  - o Kit Locations
    - City of Libby WTP
    - Lincoln County Health Department
      - Coordinate sample transport to MT State Lab-Helena

Contractors:

- Excavators:
  - o Noble Excavation – (406) 293-8824
    - Cell – (406) 293-1901
  - o Thompson Contracting – (406) 293-5392
    - Cell – (406) 293-0600
- Welders:
  - o Montana Machine and Fabrication – (406) 293-8731
  - o Twinkle Welding – (406) 293-4576
- Electricians:
  - o Master's Touch (Libby) – (406) 293-3442
    - Cell – (406) 291-6262
  - o Skyline Electric (Libby) – (406) 293-3879
    - Cell - (406) 291-7987
- Plumbers:
  - o Pival Electric & Plumbing Co. – (406) 293-6871

Suppliers:

- Chemical Suppliers:
  - o Thatcher Co. (Billings) – (406) 721-3479  
1-877-857-0392
- Pump Suppliers:
  - o Pival Electric & Plumbing Co. – (406) 293-6871
- Pipe Suppliers:
  - o HD Supply (Kalispell) – (406) 755-9242

## RESPONSE

### Flower Creek Dam and Lower Flower Creek Reservoir Intake Shutdown Procedures

Depending on the emergency, the City of Libby's Flower Creek Dam and Lower Flower Creek Reservoir intake can be isolated and shut down individually from the water supply system. The primary distribution system is gravity-fed.

- *Shut down will be directed and completed by City of Libby Public Water System staff*

Depending on the season, the City of Libby can operate without the supply source by using water in the water storage tank(s) for:

- **Summer – 12 hours**
- **Winter – 20 hours**

### Coordination Procedures

The **City of Libby PWS's** Contingency Response Plan has been made available to the Lincoln County EMA. Additionally, reportable emergencies will be handled as per the mandated reporting requirements as follows:

- X Contact Lincoln County EMA Deputy Director - **911** to report emergencies
- Include address specific information about incident/emergency

### Communication Procedures

Emergency communication within the City of Libby Public Works Department:

- **Libby Public Water System staff** will evaluate and communicate information to the City Administrator and Libby Mayor about the situation.

### **Designate Public Information Officer (PIO)**

- Provide name and contact information to press/media
- Direct all questions to PIO
- 

Upon evaluation of situation:

- o Any public statement would be developed and disseminated by the City Administrator, Mayor, or designated Public Information Officer. **Lincoln County EMA, County Health Department and City of Libby Police Department staff** will be contacted depending on the incident.
  - Examples of Draft messaging templates are attached
  - Public Message should include – Past, Present and Future highlights
    - o Describe what has happened
    - o What is/has been done
    - o Expected length of time to resolve situation
- o Determination of need to declare emergency and/or disaster status
- o *Lincoln County EMA will coordinate with County, State or Federal declarations*
  - Initiate Documentation and Reporting of incident

## **PWS Operational Response Actions**

- **Conducted by City of Libby PWS staff and other designated staff**

### **Evaluate staff resources and assign staff roles accordingly**

*Early documentation at the onset of an incident will assist in recovery efforts*

### Continue to monitor source water quality

- PWS source water
- Other nearby water sources with information available
- Perform and analyze laboratory tests results
  - o Treatment adjustments may be necessary due to changes in water chemistry
  - o Consult with contract laboratory on lab results

### Documentation and Reporting of Response Efforts

- Damage assessments
  - o Photographs with date and time and GIS coordinates (if applicable)
- Mutual Aid requests
- Emergency repair work
- Equipment used
- Alternate source costs (bottled water)
- Purchases made
- Staff hours worked
- Contractors used

### Examples of Public Messaging – Attached

- DO NOT USE - *Template*
- DO NOT DRINK – *Template*
- Boil Water Advisory – Lincoln County Public Health Department
- EPA Incident Action Checklists – (Copies in Red Folder)
  - o <https://www.epa.gov/waterutilityresponse/incident-action-checklists-water-utilities>
    - Wildfires; Extreme weather



## Procedures to communicate with water users

Door Hangers/Door to Door notification – completed by City of Libby’s staff and/or designated volunteers

Public Notice Postings: completed by City of Libby’s staff and/or designated volunteers

- City Hall - Libby US Post Office
- Libby Public Library - Various business and location in Libby
- Lincoln County Courthouse

Phone calls to Critical Customers – by City of Libby’s staff and/or designated volunteers

- **Cabinet Peaks Medical Center** - (406) 283-7000
- **Northwest Community Health Center** – (406) 283-6900
- **Dialysis Clinic** – (406) 293-9913
- **Assisted Living Center**
  - o Libby Care Center of Cascadia - (406) 293-6285
- **Treasure Manor** – (406) 293-8268
- **Achievement Inc.** – (406) 293-8848
- **Senior Citizens Center** – (406) 293-7222
- **Libby School District #4** – High School/Middle/Elementary School
  - o Central Office – (406) 293-8802
  - o Superintendent – (406) 293-8811
- **Kootenai Valley Christian School** – (406) 293-1065
- **Kootenai Valley Headstart** – (406) 293-4502

Area food establishments and Licensed Day Care Centers

- o Coordinate communication effort with Lincoln County Health Department staff

### Visitor/Tourist Information

- MT Department of Transportation Reader Boards – Coordinate through Lincoln County EMA

Local Radio, TV stations and news media – Various medias will be used for additional message broadcast - Lincoln County EMA and Public Health may provide coordination assistance

- Local radio/TV station – KLCB/KTNY – (406) 293-6234
- Local Newspapers
  - o The Western News – (406) 293-4124
  - o Kootenai Valley Record – (406) 293-2424
  - o Montanian – (406) 293-8202
- CodeRED Public Notification System
- Reverse 911
- Lincoln County EMA Facebook

## Source of emergency water

Depending on the incident duration, conservation actions and/or alternative sources of water may be necessary. Primary distribution system is fed by gravity. Storage tank supply for the City of Libby varies depending on tank levels at time of emergency as listed below.

- Winter – **20 hours**
- Summer – **12 hours**

## Management Tools

- Initiate water user conservation and/or restrictions
  - Voluntary and/or mandatory
  - Temporary and/or mandatory irrigation ban
    - Coordinate with lawn/irrigation and household maintenance companies

## Alternate sources of water

- Bottled Water
  - Coordinate with Lincoln County Health Department staff –
    - Determination of bottled water acquisition and distribution – figured by population and accountability
    - Track costs
- Local Certified water haulers- information available from:
  - MT DEQ Operator Certification Office at **(406) 444-3434**
    - City of Troy
- Area PWS – groundwater and/or surface water sources

## Distribution Center/Point of Distribution (POD)

- Coordinate with Lincoln County EMA, County Public Health, Sheriff, Libby Volunteer Fire Department and Libby Police
  - traffic controls, security and extra staff/designated volunteers
- Possible sites - (depending on emergency)

## Outside sources of water:

- Neighboring communities with Public Water Systems
  - City of Whitefish
    - contact Public Works – (406) 863-2451 or 863-2460
  - City of Troy – (406) 295-4151

## RECOVERY

### Disinfection and resumption of water service

Storage tanks and distribution systems will be disinfected for any bacteriological contamination as per the City of Libby's standard disinfection and tank cleaning procedures under the direction of the PWS certified staff. Normal water service resumption will occur after sample results indicate the supply is safe as approved by DEQ-PWS Section and the PWS certified operator.

Outreach methods to communicate resumption of service

- Coordinated through **City of Libby Mayor and/or designated PIO**
  - o Door to Door notification
  - o Postings within Libby
  - o Phone calls
  - o Social Media
  - o TV, Radio, newspaper
  - o Other methods as needed

### **After-Incident Review meeting**

After normal operational service has been restored, the City of Libby's staff will conduct an after-incident meeting with coordinating partners to discuss the emergency actions and procedures implemented during the incident. Improvements for the future will be discussed and any updates will be added to the Contingency Plan for the future.

- Depending on the incident, partners may include **Lincoln County EMA, County Health Department, Libby City Police staff and/or other agency or volunteers**

### Future Coordination

- Lincoln County EMA
  - o Completion of required documentation for recovery efforts
- Lincoln County Health Department
  - o Staff will follow up any consumer calls after public health incidents
    - Investigate health related problems connected to past water incident

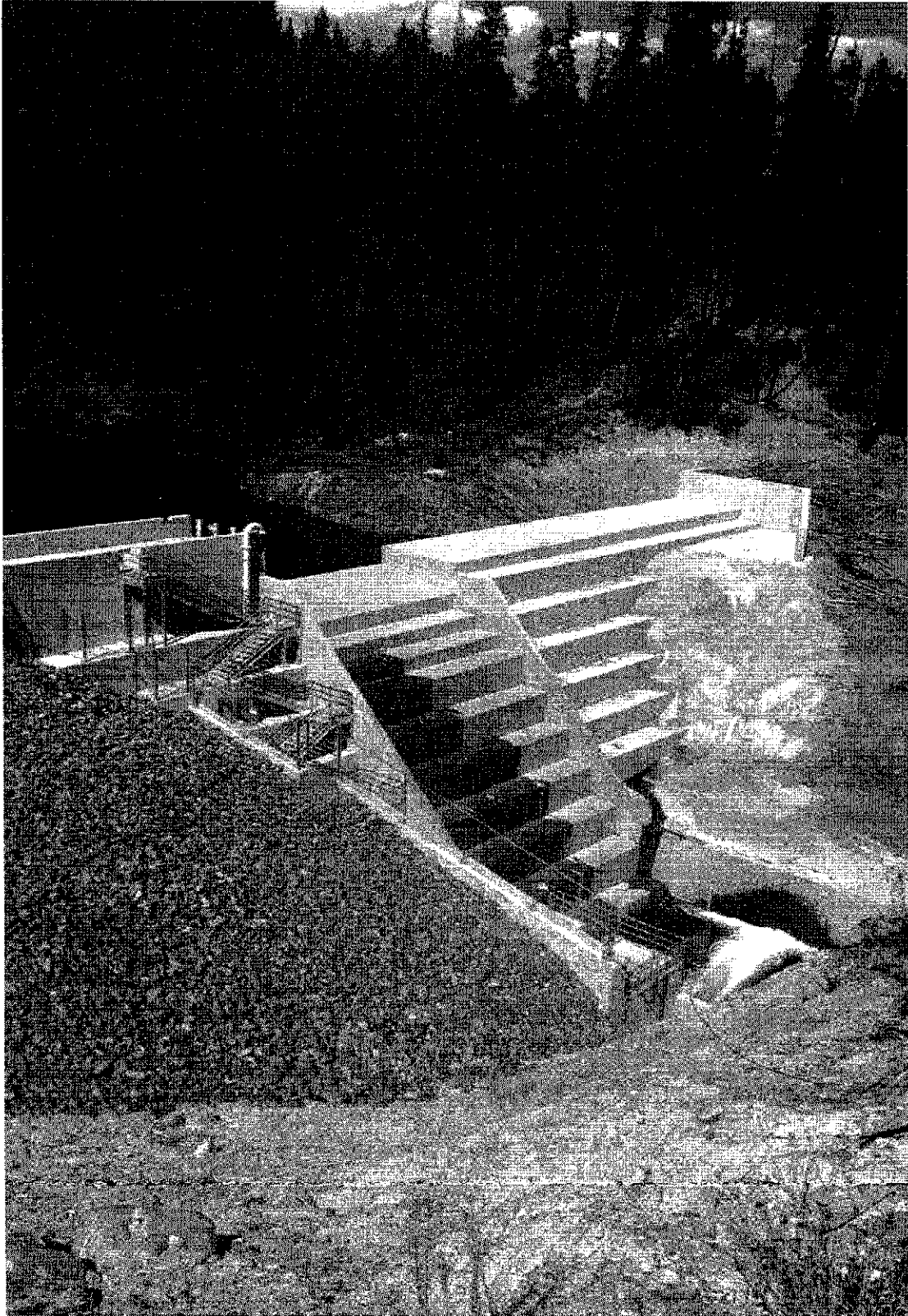
## REFERENCES

- Boettcher, A.J., and K.R. Wilke, 1978, Ground-water resources in the Libby area, northwestern Montana: Montana Bureau of Mines and Geology Bulletin 106, 36 p.
- Harrison, J.E., and E.R. Cressman, 1993, Geology of the Libby Thrust Belt of northwestern Montana and its implications to regional tectonics: U.S. Geological Survey Professional Paper 1524, 42 p.
- Kendy, E., and R.E. Tresch, 1996, Geographic, Geologic, and Hydrologic Summaries of Intermontane Basins of the Northern Rocky Mountains, Montana: U.S. Geological Survey Water Resources Investigations Report 96-4025, 233 p.
- Kuennen, L.U. and M.N. Gerhardt, 1984, A Soil Resource Inventory and Analysis for Land-Use Planning and Proposed Project Work: Kootenai National Forest, Libby, MT, 417 p.
- Montana DEQ, 1999. Montana Source Water Protection Program, Approved by EPA in November 1999.
- Montana DEQ, City of Libby Source Water Delineation and Assessment Report, August 2000, Russell Leven, Hydrogeologist, Montana Department of Environmental Quality (DEQ)
- Morrison – Maierle, Inc., 1980, Flower Creek Basin Flower Creek Dam Libby, Montana, MT-1458, 23 p.
- Raines, G.L. and B.R. Johnson, 1996. Digital Representation of the Montana State Geologic Map: A Contribution to the Interior Columbia
- River Basin Ecosystem Management Project: U.S. Geological Survey Open File Report 95-691, 19 p.
- Redmond, R.L., M.M Hart, J.C. Winne, W.A. Williams, P.C. Thornton, Z. Ma, C.M. Tobalske, M.M. Thornton, K.P. McLaughlin, T.P. Tady, F.B. Fisher, S.W. Running. 1998. The Montana Gap Analysis Project: final report. Unpublished report. Montana Cooperative Wildlife Research Unit, The University of Montana, Missoula. Xiii + 136 pp. + appendices.

APPENDIX A

New Flower Creek Dam site - 2016

Maps from 2000 SWDAR



Maps from 2000 SWDAR

Figure 1 – Location of Libby, MT

Figure 2 – Geologic Map of Libby, MT Vicinity

Figure 3 – Spill Response and Watershed Regions

Figure 4 – Location of Libby Watershed within Westslope Watershed Management Region

Figure 5 – Landcover in the Spill Response and Watershed Region

Figure 6 – Landownership in Spill Response and Watershed Region

Figure 1. Map of the Libby, Montana vicinity.

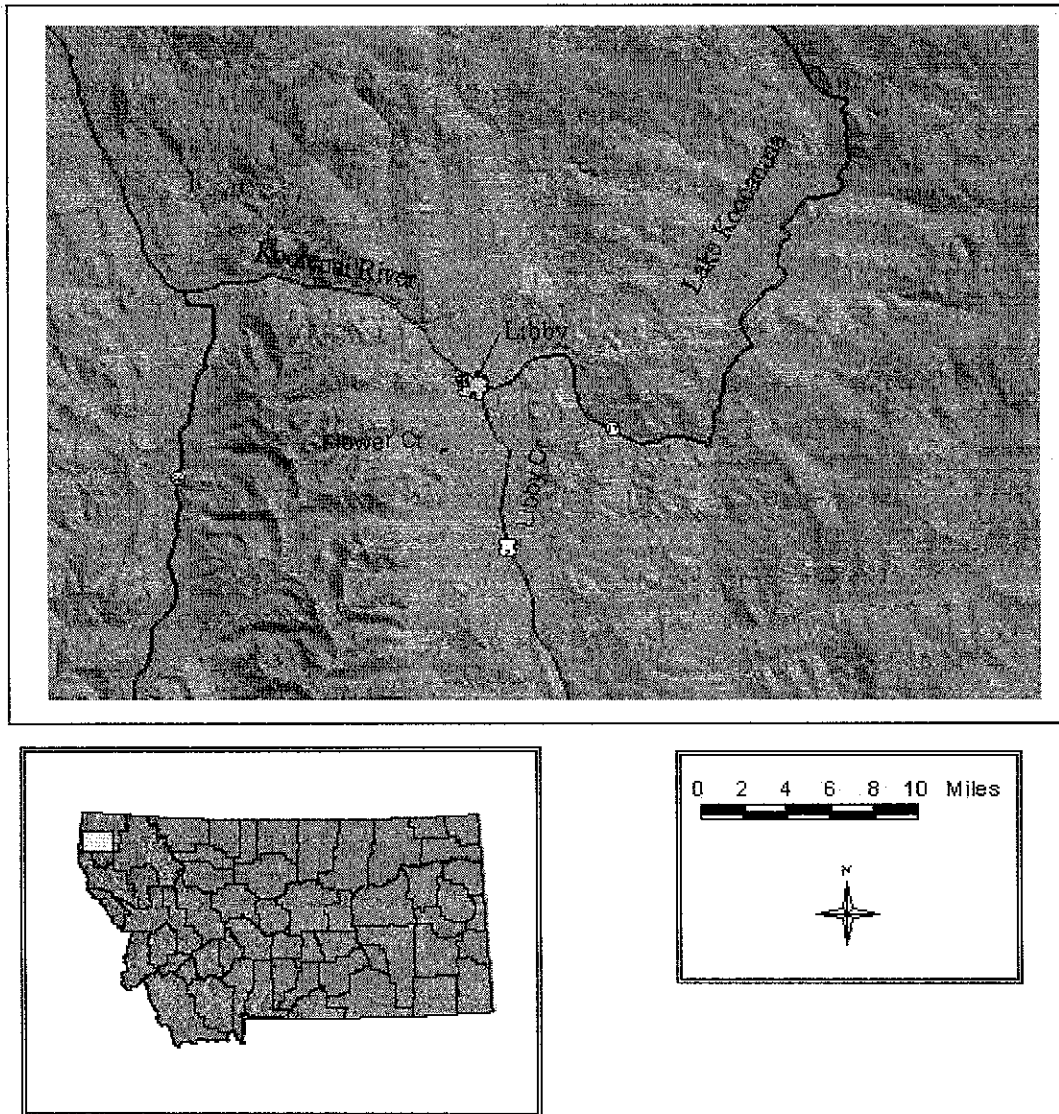




Figure 2. Geologic map of the Libby, Montana vicinity.

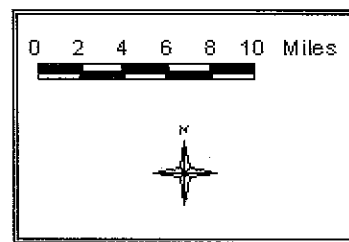
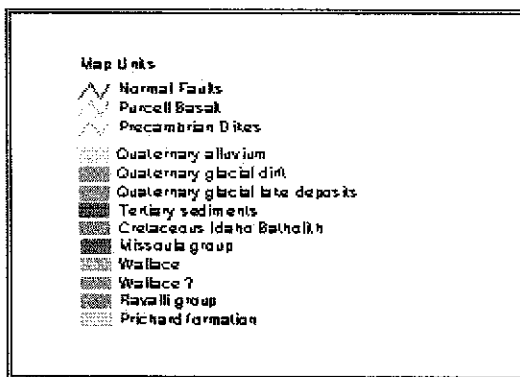
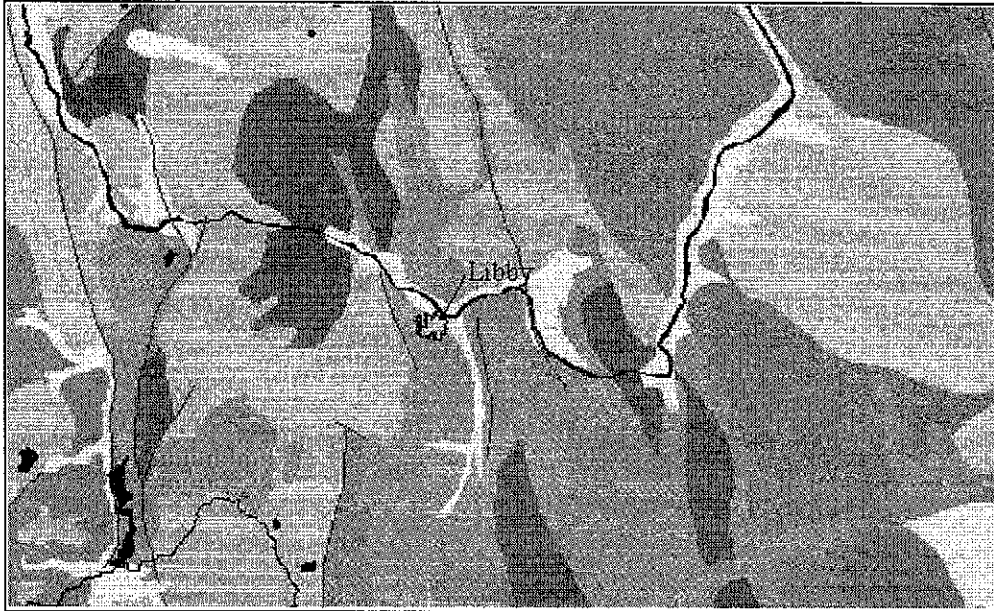


Figure 3. Spill response and watershed regions for the City of Libby public water supply.

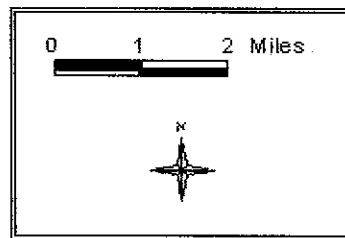
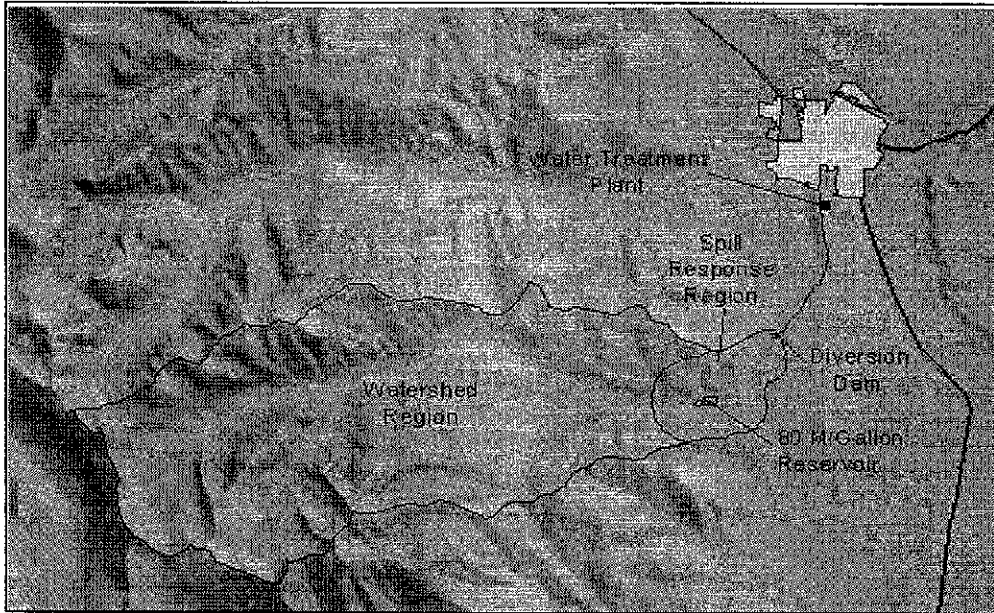


Figure 4. Location of the Libby watershed region in the Westslope Watershed Management Region.

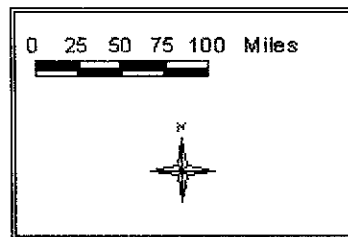
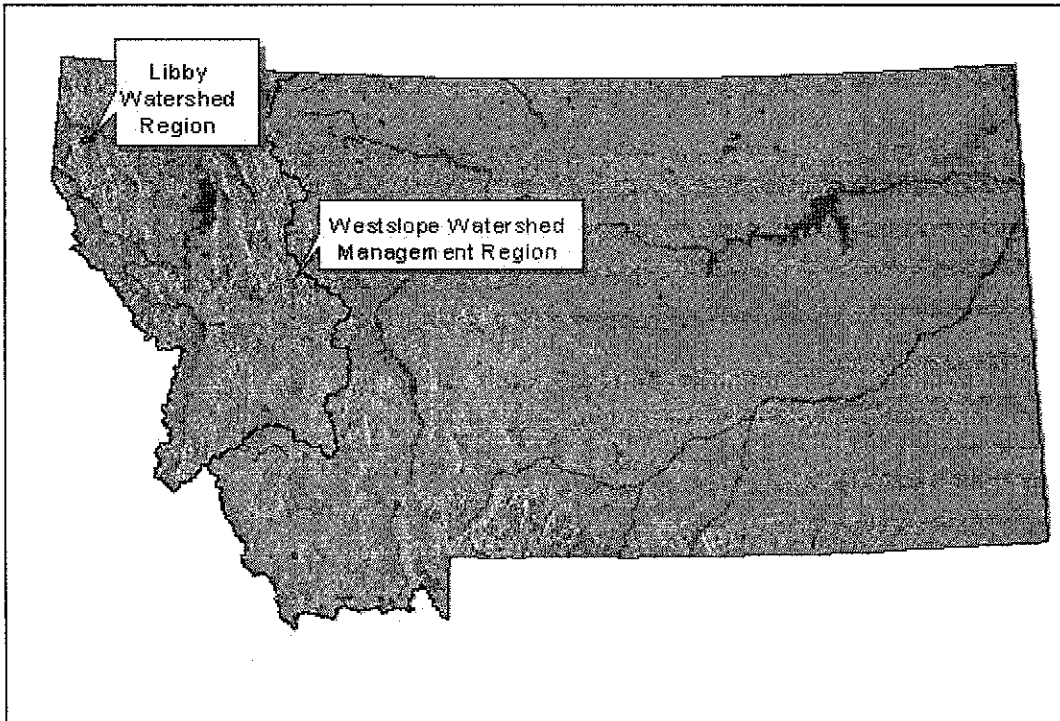


Figure 5. Landcover in the spill response and watershed regions for the City of Libby public water system.

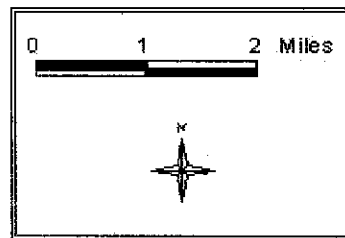
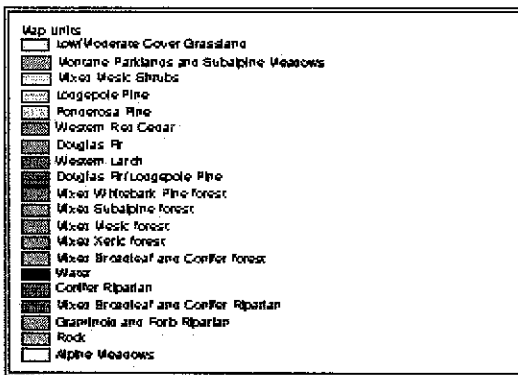
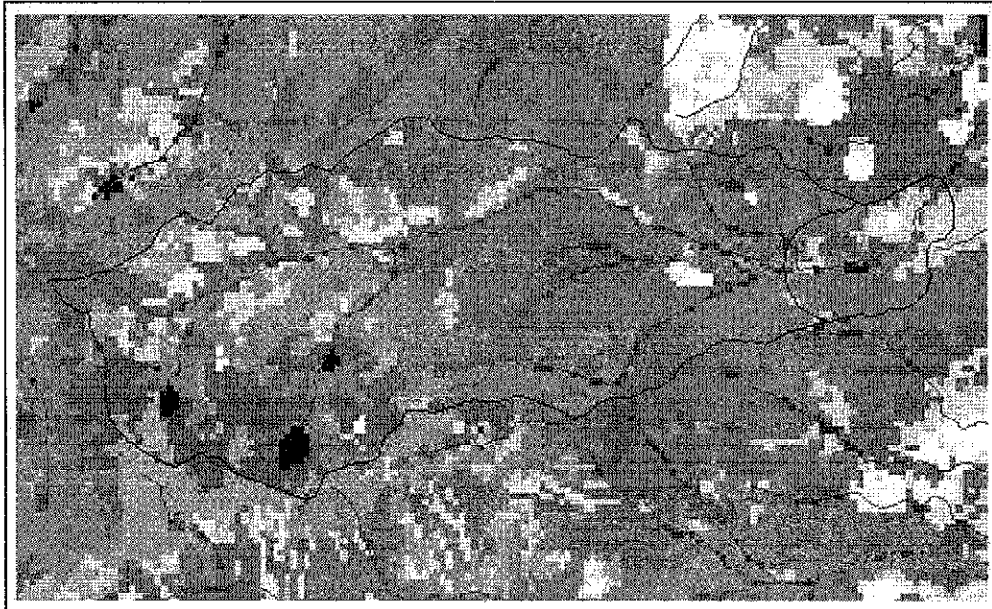
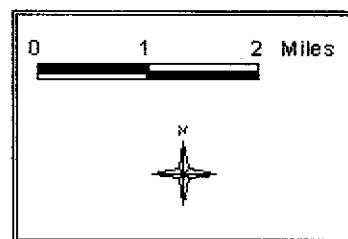
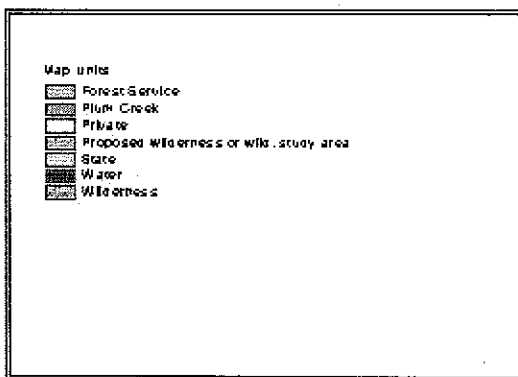
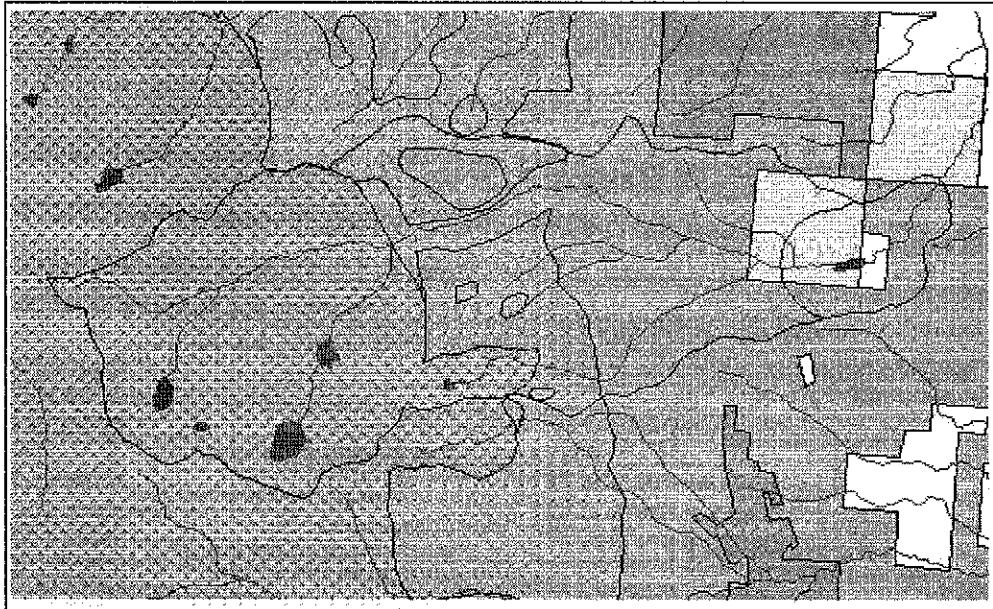


Figure 6. Land ownership in the spill response and watershed regions for the City of Libby public water supply.



APPENDIX B – MISCELLANEOUS ATTACHMENTS