

# Clearwater Model Watershed Project

## Strategic Update



**In Partnership with the Bonneville Environmental Fund**

**May 2016**

## Summary

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Our vision statement from the beginning of the Model Watershed remains relevant today:

*“Water quality and the integrity of streams, rivers, lakes and their associated biotic communities in the Clearwater watershed are essential elements to our mission. We envision a future for our Valley that has diverse, productive, tributary stream and riparian habitat networks that support resilient populations of bull trout, westslope cutthroat trout, western pearl shell mussels, and other native aquatic and terrestrial species dependent on those networks. We envision larger streams and rivers that maintain sufficient flows of high quality water to serve as effective connections for fish populations, riparian corridors for terrestrial species, and material supplies and export for the lakes. We also envision lakes in the Valley maintained with clean water in near oligotrophic (low productivity, high clarity, well oxygenated cold water habitats) condition supporting viable populations of lake migratory bull trout and cutthroat trout, a diversity of other aquatic species, and high aesthetic values for recreation and tourism. Finally, we envision a community that is knowledgeable about critical water and aquatic resources and that strongly supports conservation measures to maintain these resources for all their natural, economic and cultural values.”*

This vision for the model watershed program fits within the over-arching vision of the Clearwater Resource Council which is:

*“The Clearwater Resource Council (CRC) works to engage the community and facilitate efforts that will enhance, conserve, sustain, and protect the natural resources and rural lifestyle of the Clearwater Watershed for present and future generations.”*

The aquatics focus is designed to integrate with our terrestrial conservation programs such as weed management, forest restoration, and maintaining biodiversity along with our programs such as fuel mitigation, community education, trail planning, and regional coordination. All of these programs are intended to maintain a healthy environment, an engaged, knowledgeable, and civil community, and ultimately the ecological and economic vitality of Seeley Lake and the Clearwater Valley. After five years of work with the Model Watershed program we have made important progress, but important issues remain:



1. *Concerns persist with our lakes:* these include warning signs with algae blooms in Salmon Lake and substantial oxygen deficits in Seeley Lake and Salmon lakes that can aggravate the “tipping point”. \* (Note: as lakes become increasingly eutrophic, dissolved oxygen can decline to a point where nutrients stored in the sediments are released... a tipping point that can be difficult to reverse). We know we have growing problems with failing septic systems and maybe other nutrient sources tied to newer subdivisions (CRC 2014 SSHS Morrell Creek Report). New

challenges with climate change, including longer summers, declining flows, and aquatic invasive species remain. At the same time the management agencies have little or no capacity with lake issues. We still don't have a complete nutrient budget and a clear picture of the most important sources.

2. *Prioritization and strategic restoration remains a problem:* Contentious issues remain within and among agencies regarding roads. Technical capacity exists for stream habitat restoration, but workload and other distractions are growing. The continued agency focus is on stream habitats for native fishes. Good projects are happening, but still tend to be opportunistic and piecemeal. Collaboration and more strategic approaches are being explored, but are also being resisted by the status quo.
3. *Community outreach remains limited:* We've made important progress with volunteers and have some enhanced visibility in the community. We still struggle with local funding and support from the community. We've struggled to maintain traditional methods of outreach through the web, newsletters, and annual events. "It's your watershed": how do we use all of this to get people involved; provide support; learn more about the watershed; protect their streamside areas or lakeshore; help focus agency resources and accountability on central issues?
4. *CRC capacity remains limited:* Our primary capacity funding comes through BEF and Fuels Mitigation. We have made significant progress in expanding staff dedicated to specific programs, but much of the work still relies on volunteer time. The citizen science approach is promising, but requires a substantial effort to manage that is difficult to maintain with volunteer staffing

From this experience and recognition of our own limitations we anticipate narrowing the focus of our model watershed work to three critical areas:

1. *Simplify and focus the aquatic ecological values and goals around the lakes:* Lakes are critical nodal habitats for native fish species; lakes support key social and economic values in the community. The agencies lack capacity to focus on lakes, but have strong capacity and commitment to tributary habitats that could help mitigate nutrient sources; a narrower focus should reduce potential for conflict or resistance in collaborative efforts with the agencies.
2. *Expand and refine values and goals around people and community:* This is a component of our original commitment that needs additional focus. We have new potential for effective collaborative engagement, but stronger initiatives that recognize community vitality as an outcome of a healthy watershed are needed to move us forward
3. *Outreach & Education and Funding & Development require an expanded effort and discussion* to support both. We can define goals and measureable objectives in and around the lakes and tributary nutrient sources, and we now have the capacity to monitor those as well. We need to refine and extend similar goals and objectives to guide outreach and education in the community while we continue to expand the CRC's capacity to maintain and expand these programs.

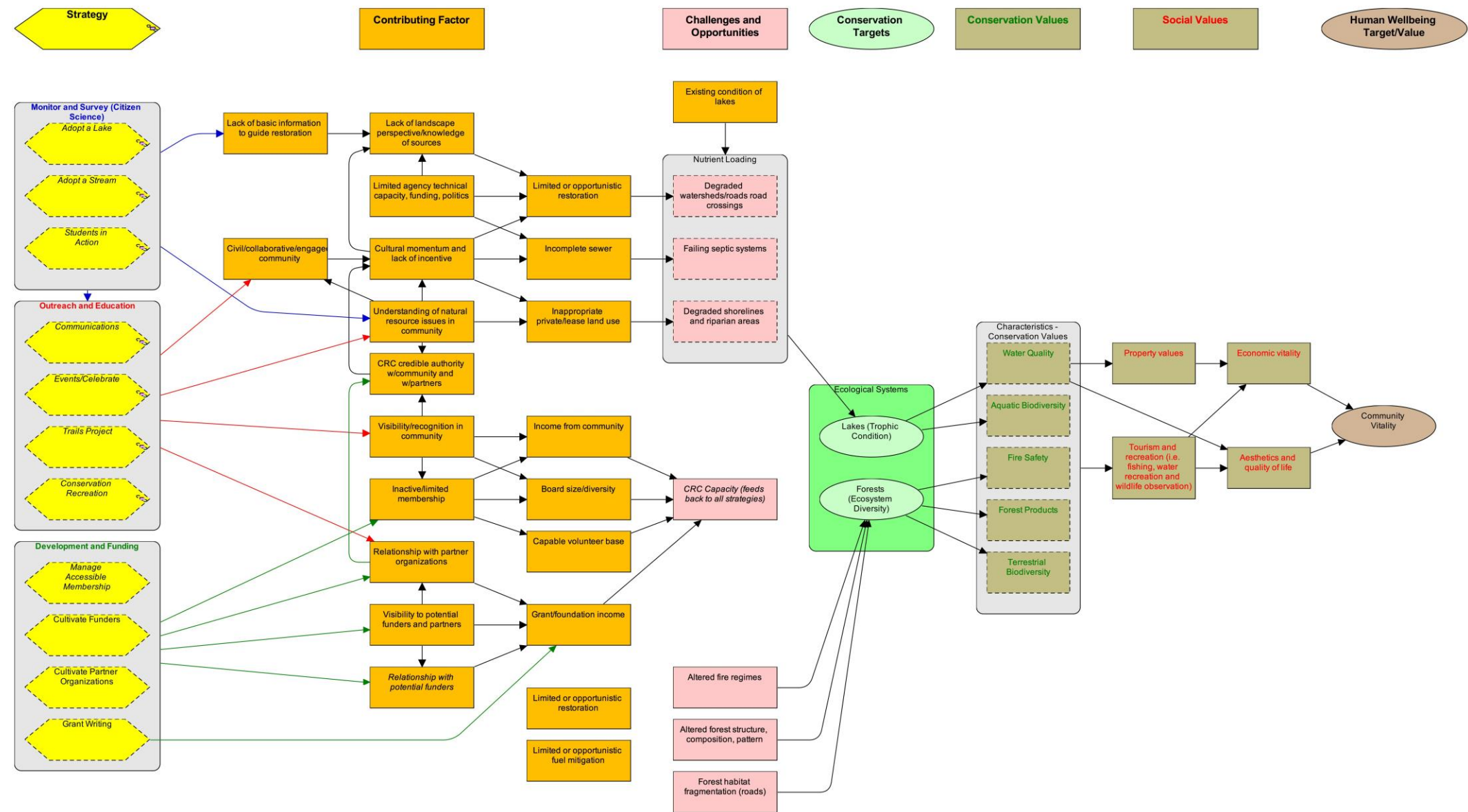
## Strategic Update

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See Conceptual Model (Figure 1)



Figure 1. Clearwater Model Watershed Project updated strategic conceptual model.



## Social Target

### Community Vitality

We believe that the terrestrial and aquatic ecosystems of the Clearwater Valley have important, inherent value independent of humans. Conservation of natural systems and the species they support is important in its own right. But, our mission includes, and largely depends on our community. Rural communities and lifestyles are fading in much of the west. Some small towns are dying with the loss of jobs linked to natural resource extraction. Others have gentrified, supported by an influx of well-healed retirees and resort developments that drive costs out of reach for many.

Much has been written about the resilience of natural and human communities, generally recognizing their interdependence and the underpinnings of diversity and adaptive capacity in both. In the Clearwater Valley the natural resources that fuel forest products jobs, recreation and tourism, and a diversifying economy depend on the restoration and conservation of the supporting ecosystems. Those natural systems, our forests, watersheds, streams and lakes are also the backdrop to our community largely defining our sense of place, its aesthetic character, and for many, our reasons for being here. Conserving and restoring the natural systems of the Clearwater to support a vital community is the central goal of our work.

### Social Values

Our focus on watersheds, forests, and ultimately the lakes comes from their ecological relevance, but also the range of social values they support. The lakes in particular support *recreational opportunities* through fishing, boating, swimming and a variety of other activities. They are part of the *scenic and aesthetic character* of the valley highlighted repeatedly in local art, advertisements, and community discussion. Local *property values* and *tourism* depend on the lakes, but the lakes are also the domestic water supply for many shoreline homeowners and the downtown homes and businesses. The lakes then are a primary engine of our local economy, the vitality of our community and our sense of place. The lakes are a natural focal point of our community and any effort that tries to connect that community to its watershed, forests, and the ecological processes that define them.

## Conservation Targets

### Lakes

Conservation of the lakes is a clear challenge and a natural focus for CRC. The lack of technical capacity in agencies makes this politically feasible and popular with both the agencies and public.

When we began our work there was long-term concern about the declining condition of the lakes, but little hard data on lake or watershed conditions. Other than our efforts, there had been almost no recent work done on water quality or nutrient sources. Since then we have learned that Seeley and Salmon lakes have not measurably declined or improved over the last 30-40 years, but are in a tenuous condition perhaps near a tipping point of accelerated degradation. The conclusion is that the lakes have limited capacity to absorb any increased nutrients and could become important nutrient sources in themselves. Recommendations from this work include efforts to: 1) continue monitoring; 2) identify and mitigate nutrient sources; 3) complete a sewer in key areas of development; 4) protect and restore riparian areas directly influencing lakes and streams; and 5) engage/educate the community to support



collaborative and informed decisions about issues like thoughtful development and a new sewer. We now have a strong baseline of information and the capacity through citizen volunteers to monitor lake conditions and extend our knowledge of nutrient sources and watershed conditions.

Concerns about water quality, cultural eutrophication, and the existing trophic status of the lakes leads us to a narrowed focus on three primary nutrient sources: *managed watersheds*, *failing septic* and *incomplete or ineffective sewer systems*, and the lakes themselves.

## Forests

Forests define the terrestrial environment of the Clearwater Valley. They are primarily under the management of the U.S. Forest Service (USFS), Montana Department of Natural Resource and Conservation (MT DNRC), Montana Fish Wildlife and Parks (MT FW&P), and recently The Nature Conservancy (TNC) in an interim capacity. Privately owned forests represent a small percentage of the basin, but these lands are the most critical from a fuels mitigation perspective as they surround the homes and much of the infrastructure of the Valley. Maintaining and restoring the diversity of native forest ecosystems is a critical aspect to maintaining the terrestrial biodiversity of the Valley as well as maintaining the quality of the lakes and streams.

Forests are also important for the broader range of ecosystem services they provide to the community including support of the local economy through forest jobs and timber products, recreational lands that support a diversity of activities and tourism. Forest conditions and their management underpin and directly interact with watershed conditions and ultimately the condition of the lakes, streams and aquatic communities that depend on them. Watershed and forest management have often been in conflict. CRC has a strong interest in, and has done important work contributing new information to the integrated management of both. CRC has provided pioneering approaches to integration of terrestrial and aquatic management, and is heavily engaged in local collaborative programs including the Southwest Crown of the Continent (SWCC) Collaborative Forest Landscape Restoration Project (CFLRP). CRC is also engaged in the Blackfoot Clearwater Stewardship Project (BCSP) that is providing recommendations for actions and policy direction to maintain healthy forests and aquatic systems while providing recreational opportunities. All of these represent important components of CRC that will be continuing and help support the aquatics focus of the Model Watershed program.

## Conservation Values

Our original vision included the *"lakes ... in near oligotrophic (low productivity, high clarity, well oxygenated cold water habitats) condition supporting viable populations of lake migratory bull trout and cutthroat trout, a diversity of other aquatic species, and high aesthetic values for recreation and tourism"*. Because the lakes support important social values and are tied to the conditions of (and activities in) our watersheds, it is useful to consider them in the broader context of natural resource characteristics supporting the conservation values that CRC works to enhance.

## Water Quality and Aquatic Biodiversity

From an ecological perspective, the lakes are nodes of critical habitat for regionally unique populations of native, migratory fishes. But they are also important to riparian and aquatic dependent wildlife such as common loons. The lakes are basic indicators of the health of our watersheds and the water quality



of streams that drain into them. If the lakes are healthy then the watersheds and streams that support western pearl shell mussels, resident populations of westslope cutthroat trout, and bull trout and other species, such as bears and lions, that use riparian corridors, must be as well.

### Wildfire and Fire Safety

Wildfire has always been part of the western forest landscape, but past forest management and changing climate have fundamentally changed fire regimes. Our community lies largely within the wildland urban interface where wildfire represents a significant threat to homes, businesses, and the infrastructure of our lives. While fire is an important ecological process influencing stream habitats, lakes and the natural communities they support, changing fire regimes can alter other ecological and social processes as well. For that reason, CRC coordinates the local Seeley/Swan Fuels Mitigation Task Force, and administers the Fuel Mitigation Program that provides funding support to private landowners for fuel thinning projects. CRC assists in educating the community on the importance of fuel mitigation to protect lives and property. CRC also works through the Southwest Crown of the Continent collaborative (SWCC) and other efforts on forest restoration important to watershed function and the maintenance of wildlife habitats.

### Terrestrial Biodiversity

The Clearwater Valley is one of the few locations in the lower 48 states that supports nearly a full complement of native species as well as having very functional terrestrial ecosystems. Maintaining the biodiversity of the Valley is a highly desired objective, as it is an important part of the overall environmental quality and social values that it supports. CRC assists in the SWCC to maintain and restore the ecosystem diversity of the Valley as one of its objectives. CRC is seeking to partner with other NGO's, agencies, and landowners to integrate biodiversity and forest management objectives for ecosystem diversity across ownerships. By maintaining this ecosystem diversity, habitat for all native species will also be maintained.

## Challenges and Opportunities (aka Threats)

### Degraded watersheds, roads and road crossings

The Clearwater Valley has a long history of industrial forestry, over a third of its acres, which has contributed to significant degradation of water quality through increased erosion, altered forest vegetation, and increased nutrient cycling. Five streams in the Basin are listed as water quality impaired, though there is no reason to believe that other streams are not as, or more, important to the problem. We now know that roads influence water quality, but most (95%) of the problems are with a very few (5%) of the road segments (2016 BEF 5 Year Report). This finding has been produced through CRC's involvement with the SWCC aquatics monitoring program. Most road problems are associated with stream crossings. Strategically focused road restoration could provide important benefits. Watersheds that were major sources also can recover significantly over time, through substantial reductions in roads and inappropriate land management practices.

In our original work we piloted a landscape strategy to identify the key watersheds for restoration and thoughtful management based on the anticipated effects of roads and the values associated with remnant populations of native salmonids. That scheme is still valid and the agencies and their partners



are moving to restore habitat conditions for those species. But as our focus narrows to the lakes, we need a similar foundation to prioritize restoration that will directly influence their long-term conditions.

We have an inventory of roads, new understanding of erosion and nutrient sources, and tools like NetMap and GRAIP to help identify potential hotspots, but these have not yet been widely adopted by managers. We have also piloted watershed scale monitoring that can show differences among watersheds in their export of nutrients. We have yet to extend that sort of monitoring to the entire Basin. As a result, watershed restoration remains focused on issues associated with local habitat for salmonids and still tends to be largely opportunistic regarding erosion or other nutrient sources. Projects lack coordination and the broad landscape, knowledge of the most important sources or any understanding of the magnitude of change needed to improve conditions. Important constraints on progress include declining budgets and overworked technical staff with lead agencies. Programs tend to be entrenched in a more independent and opportunistic approach to restoration that may be threatened or burdened by public involvement and broader coordination. There is an entrenched power structure in some existing agencies and little public ability to influence this or political incentive for change.

#### Failing septic systems

For more than 10 years, the Seeley Lake Sewer Board has monitored increasing groundwater contamination from septic system failures up-gradient of Seeley Lake and the Clearwater River. Our own work with local schools and volunteers shows that Morrell creek receives a substantial input of Nitrogen (N), and, to a lesser extent, Phosphorus (P) associated with housing and resort developments. We have also shown that elevated nutrients do occur in near stream groundwater in these areas.

The planned sewer is not fully funded and will necessarily be incomplete from the start. It will address portions of the downtown area, but not encompass much other development that may directly influence waters downstream or upstream of downtown Seeley Lake for some time. There remains some resistance to a sewer in the community as well, and it is not clear that key areas would ever be included in future expansions. Although plans for a sewer appear technically sound, it cannot eliminate nutrients entirely and will become a potential source to ground water in the Morrell drainage. Sewer systems can become important point sources even though they are intended to mitigate many non-point sources of nutrient contamination. Although the Sewer Board does have long-term monitoring of groundwater wells it does not have a strong baseline or foundation for monitoring in Morrell Creek or the lakes outside of the work we have done.

#### Degraded shorelines and riparian areas

Over the last 5 years we have done some work to understand and restore the conditions of lake and stream shorelines or riparian areas. We know from casual observation and informal surveys by MT FWP and USFS, that many areas have been affected by local development including violations of stream-side protection laws. Boat traffic and lake recreation access points are contributing to shoreline erosion as well. We lack a comprehensive understanding of shoreline conditions and their relative importance to the larger issues. Lack of enforcement, and poorly informed or minimally concerned landowners, and political sensitivities around property rights also contribute to the issues. Restoration efforts are



necessarily small and opportunistic though they can serve as useful examples for the education of landowners and the broader community.

### CRC capacity

CRC has historically been a small group of talented volunteers who have a similar outlook and are willing to work hard for natural resource conservation. The organization has been driven by the board of directors. CRC's members are few and not particularly active. CRC has a limited number of active members serving as volunteers in various capacities. The board of directors is small, and funding is stable but limited. Even with these restrictions, CRC has accomplished a great deal in meeting its mission in the Clearwater basin. However, if CRC is to grow and increase its impact on natural resource conservation, it will be critical to increase active membership, grow the board of directors, and expand organizational, capacity and funding. While the board of directors has historically been exceptionally active and productive, this level of activity may not be sustainable indefinitely. To keep the organization healthy, it must evolve from a board driven to a staff driven format, expand its active membership, and increase long-term funding.

### Altered fire regimes

Altered fire regimes could result in wildfire that is far more extreme than historically occurred in the Valley. This could affect both terrestrial and aquatic objectives. Forest management by the USFS has identified uncharacteristic wildfire as an issue to be addressed. The collaborative Southwest Crown of the Continent (SWCC) is currently assisting with the Blackfoot Swan Landscape Restoration Project (BSLRP), which is designed to maintain and restore biodiversity and address uncharacteristic wildfire. The ability to work effectively with this team remains a concern. Addressing wildfire across land ownerships has generally good support, but still needs to be coordination. CRC is well positioned to assist with this coordination.

### Altered forest structure, composition, pattern

As discussed under Terrestrial Biodiversity, maintaining and restoring the native ecosystem diversity of the Valley is an important component of forest management. The USFS is attempting to address restoration needs, but has numerous challenges to achieving this. Coordinating with other landowners including MT DRNC, MT FW&P, and TNC lands is important. While each landowner/manager is operating under different management objectives, coordination among landowners can address the setting of desired forest conditions for the overall watershed while incorporating the objectives of each landowner/manager.

### Forest habitat fragmentation (roads)

Some areas within the watershed, particularly the former industrial forest lands, have relatively high road densities. In some areas, this is contributing to fragmentation of habitat or loss of security areas for some sensitive species. These factors need to be considered while also incorporating the effects of roads on desired aquatic conditions. While there are negative effects of roads, the concern for these must be balanced with the positive factors provided by roads including recreational access and access for management activities.

## Strategies

### Monitor and Survey

We propose to maintain and broaden our efforts with “Citizen Science” as an efficient means of generating basic information on our lakes and the watershed conditions and human activities that influence them. Maintenance of these programs through time can provide information on trends and changes in response to restoration and other activities in the watershed. Targeted efforts can be used to develop critical new information.

These programs also act as an effective way to engage and educate interested volunteers and students on natural resource issues. They can also help us build relationships with other partners (NGOs and Agencies) in the region. We will continue to focus on three established activities. *Adopt-a-Lake*, *Adopt-a-Stream*, and *Students-in-Action*. The first provides basic information on lake trophic status and a link to lake homeowners and others in the community that recreate or rely on the lakes. The second provides a means of gathering information about potential sources of nutrients across the broader watershed while helping volunteers and the community see the connections between their lakes and changes in the watershed. The third focuses on intensive monitoring of Morrell Creek bringing real world science the local environment into the classroom while building a relationship with the schools and the community.

### Theory of Change

The lakes are the backdrop to our community, and an important and logical place to draw attention. The lakes are also the best indicators of conditions in the broader watershed. Using the lakes as our focal point we hope to bring the agencies, partner organizations, and the community together around issues of conservation and restoration in the Clearwater valley.

Information on the condition of all the lakes and any trends (or lack of trends) is basic to effective restoration. The established methodology for each activity, a base of existing information, and cadre of committed volunteers provide a foundation for long -term monitoring and a continually improved understanding of lake function.

The agencies primarily responsible for water quality or watershed management, and partner groups supporting restoration either have limited expertise or limited funding and other resources to consider the issues associated with lake eutrophication. Our lakes were “delisted” as impaired water bodies because of a lack of new information and an assumed, but undocumented, recovery following the decline of industrial forest activities. We assume hard information can be useful in holding the agencies accountable and in stimulating a focus in their programs most relevant to our community. We also assume it will be critical to understanding whether efforts to conserve or restore lake and watershed conditions are ultimately successful.

Citizen Science provides a cost-effective way to gather important data. It can be an effective way to engage and educate people in the community as well. We have seen our volunteers become informed and outspoken on critical water related issues. We assume those volunteers can be as, or even more, effective at engaging at educating others in the community than a handful of staff and board members. Much of the academic work on this approach supports that notion. We assume an interested and

informed community is likely to be more engaged and thoughtful in the critical discussions with agencies and others helping create the incentive to focus limited resources and commitment on the issues that matter most.

### Objectives

Our objectives are three fold: 1) to provide the basic information needed to guide, and evaluate the effectiveness of, restoration; 2) to generate a basic understanding of, and value for aquatic dependent natural resources in our Valley; and 3) to provide material and opportunities for more focused programs on Outreach and Education. Each of our activities addresses all three objectives.

### Activities

#### *Adopt a Lake*

We have completed seven full seasons of monitoring in all of the major lakes of the Valley. Monitoring has been conducted through trained volunteers using an established Sampling and Analysis Plan. The effort has generated extensive, information on water clarity and temperature and more focused information on dissolved oxygen and nutrient concentrations. We have engaged more than 70 individuals in the program providing them with a new perspective and information about the lakes and what it will take to



conserve them. We now have a strong baseline of the current trophic condition and the seasonal and inter-annual variability in each system. That established methodology, information and cadre of committed volunteers provides a foundation for long-term evaluation of any trends in the lakes, nutrient sources in the lakes themselves, and a connection with the broader community.

1. Gather basic, high quality data on the trophic conditions of all major lakes utilizing trained and managed volunteers
  - a. Coordinate transparency and temperature sampling: recruit, train, and coordinate volunteers, manage data, and maintain appropriate QA/QC
  - b. Coordinate dissolved oxygen monitoring on select lakes to add higher resolution information on AHOD, coordinate volunteers, and manage data.
  - c. Conduct periodic nutrient sampling in-lake and above and below lake to determine whether lakes are acting as sources.
2. Coordinate efforts with those outlined under Outreach and Education.



- a. Produce written reports, information and materials to support to meetings, workshops, videos or other outreach efforts.
  - b. Annual lake by lake summary shared with home owners associations and volunteers
  - c. Periodic state of the lakes report and community discussion... (foundation for State of the Watershed?)
3. Find funding and expertise to conduct paleo-limnological work to understanding the long term history and effects of development in the valley, cool, gee-whiz science that will tell a big story and get everybody's attention.

### *Students in Action*

We recently completed our 4<sup>th</sup> year of intensive monitoring in Morrell Creek. That project has engaged hundreds of junior high and high school students in their local environment, provided an important link on water quality issues in the community and important information on one of the major streams in the Basin. Continuous flow information and three years of complete nutrient budget information serve as a baseline for understanding long-term change in the Morrell watershed. Morrell Creek provides our best opportunity to understand the effects of planned forest and road restoration, a new community sewer system, and climate change. It provides a calibration for broader surveys and monitoring in the basin and foundation of outreach and education at all levels. It provides a connection to funding sources and other partners in the larger region interested in linking schools and communities around common issues.

1. Gather basic, high quality data on flow, temperature, turbidity and transport of nutrients and sediment in Morrell Creek.
  - a. Plan and coordinate regular stream flow and temperature sampling with teachers, students and volunteers, to calibrate and maintain the stream gage, manage data, and maintain appropriate QA/QC
  - b. Work with state and federal agencies to provide measurements and analyses beyond the capability of the schools/volunteers (e.g. Peak flow measurements; surveyed cross sections; high frequency turbidity measurements)
  - c. Provide classroom materials and support with curriculum.
  - d. Maintain long-term data sets
2. Gather basic information on the fish community associated with Morrell Creek.
  - a. Coordinate annual electrofishing effort with schools and MT FWP
  - b. Provide basic sampling and safety equipment
  - c. Summarize results and share with students and teachers.
3. Coordinate efforts with those outlined under Outreach and Education.



- a. Produce written reports, information and materials to support to meetings, workshops, videos or other outreach efforts.
- b. Annual lake by lake summary shared with home owners associations and volunteers
- c. Periodic state of the lakes report and community discussion... (foundation for State of the Watershed?)

### *Adopt a Stream*

With detailed information from Morrell Creek and support through the Southwest Crown Collaborative, we piloted a citizen science approach to stream survey and monitoring. We will build on that effort to survey many more streams across the Clearwater Basin. The information will serve as the first synoptic look across major watersheds in the Basin. Basic data will describe existing conditions of flow, sediment and nutrient transport, and will help identify watersheds that are important sources influencing the lakes. It can help put formally “listed” streams in a larger context and provide the foundation for more strategic watershed restoration in the Basin. Results will provide baseline for monitoring as restoration, climate change and development continue.

1. Gather basic, data on turbidity, nutrient concentrations and flows in streams representing major watersheds of the Basin.

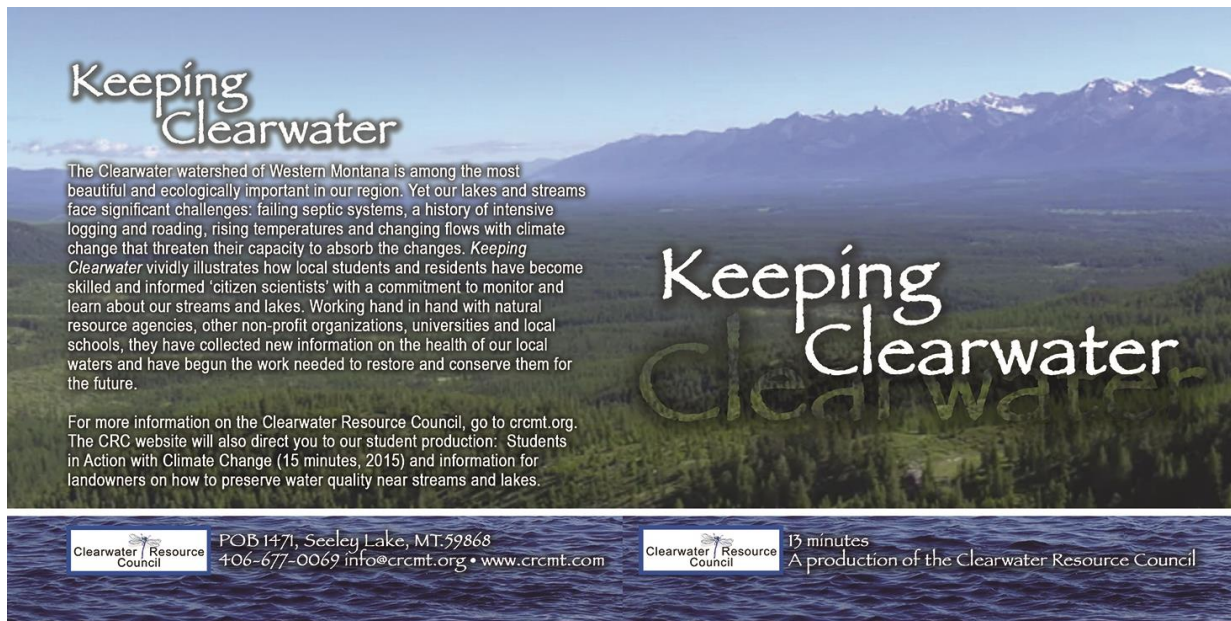


- a. Coordinate turbidity and nutrient sampling: recruit, train, and coordinate volunteers, manage sample collection and storage, and maintain appropriate QA/QC
  - b. Coordinate sample analysis with appropriate laboratories, manage contracts and resulting data.
2. Work with Agency hydrologists, soil scientists to explore sampling frequency for turbidity to validate lower frequency of volunteer based sampling
  3. Coordinate efforts with those outlined under Outreach and education.
    - a. Produce written reports, information and materials to support to meetings, workshops, videos or other outreach efforts.
    - b. Annual lake by lake summary shared with home owners associations and volunteers
    - c. Periodic state of the lakes report and community discussion... (foundation for State of the Watershed?)

## Outreach and Education

We propose to maintain and broaden our outreach and education efforts to achieve several purposes. We aim 1) to reach more area citizens with an understanding of natural resource issues in the community, 2) to step up CRC's visibility and recognition in the community, 3) to deepen our working relationships with partner organizations and 4) to increase the knowledge of the resources available for civic and collaboration engagement and problem solving.

Here in Seeley Lake we face a particular challenge with our area population. Our town's population grows by almost 100% when summer residents return. In addition many of the full-time residents are retirees from other areas of the country who move here seeking the beauty, privacy and natural resource opportunities the Clearwater watershed provides, but may not have a good understanding of the natural resources in the area or how these help support the community's vitality. As stated by MT FWP Fisheries Biologist Ladd Knotek in CRC's current film, *Keeping Clearwater*, *"In the Seeley Lake community, we have a high number of seasonal resident people here, and they really don't understand where they've built their cabin. They don't understand when they degrade the shoreline or the stream, they're basically destroying what they've moved here for...and hopefully that knowledge will filter up and the community as a whole will have a better understanding of what's here."*



A second challenge to effectively educating our population is the resistance of many 'old-timers' who sometimes think that the best practices to preserve the quality of natural resources might challenge their perception of their private property rights. Some may resist the efforts of the Seeley Lake Sewer Board and others who are working to resolve the issues of failing septic systems and funding for an effective sewer system. They may also engage in opportunistic or misinformed recreational and development activities or disruptive practices on their land or the land leases available in the Seeley Lake area such as disruption of stream banks, removing riparian vegetation, or placing fertilizer near





water sources (increasing nutrients). CRC is seeking effective ways to communicate that conserving our forests, lakes and streams is in the best interests of everyone and to unite people in that purpose.

### Theory of Change

Information is powerful. People are more able to respond to the issues of heavy fuel loads in their surrounding forest or the impact of a failing septic system in their lakes once they understand how it impacts their self-interest. Often, citizens may not have access to information provided by the U.S. Forest Service or Montana Fish, Wildlife and Parks. Local residents often simply lack the knowledge of the impact of degraded shorelines and riparian areas, poorly constructed road crossings or spraying pesticides near creeks and riverbeds. In our landscape, one person's bad habits inevitably impact someone downstream, so we benefit as a community when we share a common understanding of these issues and their remedies.

Because CRC is a non-profit, community-based organization, we can play an important role in this community to conserve one of the most important watersheds in the United States. And to that end, we are working to increase CRC's visibility and recognition in the community through our communications and programs. By raising the visibility and credibility of CRC with the public we believe that we can also improve our political capital with the agencies. Public involvement and support is critical to agency mission and to the extent that we can either represent the public interest or broker the connection, we can help influence thoughtful management decisions.

CRC also recognizes the power of informed citizens and we are working to empower our volunteers to become knowledgeable about and outspoken on critical water related issues. As seen in our two recent films, which highlight interviews with our volunteers, those volunteers can be as, or even more, effective at engaging and educating others in the community than a handful of staff and board members.

We assume that as citizens become knowledgeable they are more likely to participate in discussions with agencies managing our watersheds. We assume that they will be more likely to engage with the county and others making the fundamental decisions about land use, sewer construction, and where and how development and restoration progress. We assume that an informed and engaged community will create the incentive for agencies to focus limited resources and commitment on the issues that most affect the community, its environmental quality, and its economic vitality.

CRC is a relatively small organization and our region of the Southwest Crown has several other larger NGOs that have had notable success and recognition in natural resource conservation. Our intent is not to replicate all that other organizations do, but to leverage their experience, expertise and support to focus new resources and work in the Clearwater. As we expand and improve our collaborative relationships with partner organizations we gain tools and resources that can expand the impact of our programs. By gaining their recognition and support we can gain recognition and support of their partnering foundations and others, strengthening our own opportunities for new funding.

In the past, many natural resource issues such as the sewer and land-use planning have been mired in controversy. Often, progress has been stalled by outspoken or misinformed critics, and thoughtful compromise has proven difficult or impossible. Many fear change, but fail to recognize that by not



participating effectively they fail to guide the inevitable change in ways that most benefit our entire community. We believe that we all benefit when people learn the skills to communicate effectively and solve problems together. CRC's current community building training sessions work to demonstrate how collaboration works, to share the skills of conflict resolution and to make the community more effective as we work collaboratively through problems rather than increasing divisions and tensions through misunderstanding.

### Objectives

Our objectives are: 1) to increase community understanding of natural resource issues and how those issues impact us all; 2) to increase CRC's visibility and recognition in the community by publicizing CRC's educational programs, workshops and events; 3) to deepen our working relationships with partner organizations in the area; and 4) to create a community engagement process so citizens can effectively address natural resource issues through a process of civil engagement and collaborative problem solving.

### Activities

#### *Communications*

We see routine communications as one of our most basic tools for outreach and education. CRC's current methods of communication are through our regular Email Blasts, our website ([crcmt.org](http://crcmt.org)), Facebook, several recent film (digital media) projects and YouTube presence, print advertising in the local paper The Pathfinder, posters and flyers. We have struggled to maintain each of these forms of communication and many are either outdated or used infrequently or ineffectively. We need to recommit to media and approaches that we know bring results and carefully evaluate others. Our priorities for work will reflect the cost and benefit of each approach.



1. Communicate regularly with our membership and interested partners, citizens, agencies and others via traditional Social Media. Generate content via staff and board members and update the appropriate media regularly through active volunteers.
  - a. Maintain vertical response, e-mail blasts as the most effective and aggressive means of communication.
  - b. Update content and graphic presentation of web page.
  - c. Evaluate the potential of Facebook re: costs and benefits.
  - d. Evaluate the potential effectiveness of Instagram.
2. Utilize digital media based on existing films and supporting materials.



- a. Distribute existing films and supporting information to civic organizations, schools, local and regional governmental representatives, and opinion leaders.
  - b. Publicize on our website and that of our partners and supporters.
3. Re-brand and publish a quarterly newsletter "Partners for the Clearwater" with regular content updating the community on issues, opportunities, events, workshops etc.

#### *Events and Celebrations*



Special events and celebrations can be a particularly effective way of engaging citizens providing an opportunity for social connections in the community, visibility for CRC, and education. Events also provide an opportunity to generate some funding though that may not be the primary purpose. Events can be the building block for a long-term strategy to bring the community together around a wider vision of the watershed including social, economic and other issues related to vitality. This could be measured by environmental education and awareness, maintenance of natural resource jobs, prevalence of local food: everything that makes it possible conserve the watershed and all the values it represents or supports.

1. An annual *Celebrate the Clearwater* event in mid-summer. This event would combine activities that celebrate our area's beauty and recreational opportunities, combined with reports on the state of the forests, streams, rivers and lakes in our watershed, including:
  - a. Presentations from the agencies and others doing watershed work to report on the state of the watershed, pin pointing strategic areas that need attention and help motivate the agencies to move towards a goal.
  - b. Information on all of CRC's programs that impact the watershed – fuel mitigation, AIS, stream and lake monitoring, and solicitation for volunteers for those programs.
  - c. Screening of the "Keeping Clearwater" film produced by CRC about the importance of our water quality in the Clearwater watershed, or other recent media projects such as "Students in Action with Climate Change."
  - d. Recreation + conservation activities: fly fishing workshops, a presentation on the progress of The Trails Project, guided hikes, Citizen Science student presentations, youth activities, wilderness preparation workshops, vendor booths featuring outfitters, wilderness & recreational items, including SLE Outside. Events might include a geocache treasure hunt for adults and kids. Media coverage of this event is essential. In addition, we could engage the participation of our partner organizations and area businesses. Partners such as the Blackfoot Challenge, Swan Valley Connections and the agencies could stage booths to broaden the information to the status of the entire Southwest Crown of the Continent. Area outfitters, fishing guides, and recreational organizations can promote their services. Our numerous recreational partners that are currently engaged in the Trails Project could stage informational booths about their activities, including Backcountry Horsemen, Driftriders snowmobile club, ATV club, Seeley ROCKS, and the Montana Wilderness Association.
2. Pure Montana Tales events, featuring educational and informative speakers, six times annually in collaboration with the Blackfoot Challenge.

**PURE MONTANA TALES**  
*presents*



**WILDLIFE CAMERA FILM FESTIVAL**  
**Thursday, January 21, 7 pm**  
at SLE Outside  
in the Bison and Bear Mall,  
Seeley Lake, MT

Join local wildlife tracker, field biologist, and naturalist Adam Lieberg for an evening film viewing of native carnivores in the southern Crown of the Continent. He will be showing and interpreting game camera footage that highlights the rarely-observed behavior of elusive carnivores such as wolverines, Canada lynx, grizzly bears and wolves.

Credit: Adam Lieberg      Credit: Steven Gnam

Questions? Call Jenny at 754-0034 or email at [jenny@crcmt.org](mailto:jenny@crcmt.org)

### Conservation + Recreation

While it is CRC's intent to disseminate natural resource conservation information and educate the residents and visitors to this watershed, we believe that teaming up fun activities with learning opportunities is an effective way to bring a larger base of active and engaged citizens to bear on resource conservation. Moreover, this will expand and enhance CRC's overall presence and effectiveness in this region and create an outreach strategy to build membership and enhance our relationships with local and regional "partner" organizations.

Over the next five years, CRC anticipates creating and growing membership by using a *Partners for the Clearwater* initiative. The purpose is to use recreation as a tool to grow relationships, increase educational opportunities, expand CRC impact, and establish a broad-based membership. CRC will provide services that engage local residents in

recreational activities they enjoy in the Clearwater watershed while providing education and information about how to maintain the environmental health of the land and water in the Clearwater drainage. This will include activities such as:

1. Offer recreational and educational workshops such as fly-fishing, fly tying, guided hikes, wildflower identification, snowshoe instruction, back country skills, kayaking, wildlife tracking, gardening workshops and more for youth and adults. (See discussion above on Recreation + Conservation.)
2. Publish an updated CRC Newsletter titled Partners for the Clearwater
3. Sponsor events that involve local and regional partners that educate local citizens about natural resource issues while enhancing partner relationships and bring publicity to CRC. This would include events such as Pure Montana Tales and an annual event called "Celebrate the Clearwater"
4. Sponsor geo-cache events leading tourists and locals to areas of riparian restoration, important natural landmarks
5. Recruit and train volunteers for participation in Adopt-A-Lake and Adopt-A-Stream

This will provide an avenue for those residents that we reach through these recreational activities to become more involved in other CRC programs, such as AIS, Aquatics monitoring, weed management, forest management and wildlife monitoring and more through volunteer training and recruitment.

### *Trails Project*

In 2014, CRC initiated an ambitious regional *Trails Project* with over 15 area recreation-based non-profits and agencies to plan and build a landscape-wide multi-use trails system that enhances the recreational opportunities in the area and bringing much needed economic development to the community. This effort was designed to develop community recognition of CRC's leadership capacity, and create a program of community consensus building and education about important resources in our landscape. Seeley Lake depends heavily on a tourist economy. If we want to improve the economic vitality of the community, we can take advantage of the incredible natural resources we have to increase tourism. However, we must be careful to ensuring careful use of the resources so as not to degrade the very features that attracted tourism in the first place. We do have an opportunity to educate the residents and visitors about our resources and in doing so we can improve quality of life while increasing conservation efforts. This is a description of the Trails Project planning process.

1. Continue and expand a series of community building training sessions to involve leaders and doers in the community to learn the skills of collaboration and creative problem solving. The immediate goal is to address the desire to build a trails system for Seeley Lake that will enhance economic development and boost geo-tourism. Our long-range goal is to involve a critical number of community leaders in this training so members of the community are able to apply these skills to future issues and needs of Seeley Lake.
2. Engage in fund raising to enable the Trails Project to complete the planning phase of the project which includes a thorough landscape assessment on which to build trail planning.
  - a. Consider a state-wide crowd funding campaign that features the voices of the community describing the vision for the Trails Project. This campaign will also require the partners in the Trails Project to reach out to their members and contact lists for financial support.
  - b. Approach appropriate grantors for funding for the planning process and/or to match the monies raised through crowdfunding.
  - c. Encourage project partners to approach additional funders for specific aspects of the Trails Project planning.
3. Employ experts to initiate data and information gathering by compiling available GIS maps and other information pertinent to the project.
4. Meet with USFS, MT DNRC, MT FW&P and TNC personnel to obtain additional maps and information on existing roads and trails and possible constraints for adding any new trails or uses.
5. Suggest watershed divisions to facilitate discussions on a smaller sized mapping of road/trail management units. For each unit, primary landowners/agencies (USFS, DNRC, FWP, TNC, others) will be identified.
6. Create a public outreach process to engage the broader community in setting priorities for area trails.
  - a. Collect and compile input from all interested groups or individuals and combine these into a consolidated road/trail map with uses that have been suggested by groups or individuals.
  - b. CRC and stakeholder organizations, as appropriate, will initiate discussions with landowners/agencies on how to fully implement the trail system identified in the trail plan.





7. Develop a landscape wide trail system that provides opportunities for both short and long term trail maintenance, expansion, signage, mapping, interpretive trails, and planning for economic development.

### Development and Funding

Clearly the health and success of this organization in achieving its goals depends upon adequate funding, productive staffing, participative board members, thriving relationships with local residents and other organizations, and effective strategy and planning. This aspect of the organizational development is difficult and requires dedicated planning and consistent follow through, but is not an appealing way to spend organization staff and board time because it does not provide a visible impact on natural resource conservation. CRC's evaluation of this aspect of organizational strategy will concentrate on four primary activities s; Managing Accessible Membership, Cultivating Potential Funders, Cultivating Partner Organizations and Grant Writing.

### Theory of Change

CRC has been very effective in accomplishing natural resource conservation on a small scale, and collaborating with other organizations and agencies to generate important new landscape level data and information. We have also begun to bring political will to bear on resource issues. This has traditionally been done with exceptionally limited resources. However, it takes staff time, volunteer time, and a great deal of time by the volunteer board of directors to sustain these efforts. CRC understands that it is not ultimately sustainable for the board to maintain this pace and proposes to transition from board driven to a staff maintained organization. This takes a clear organizational strategy and sufficient funding for capacity. It requires an active and quality membership, an effective campaign to develop relationship with funders, and the will to engage with other individuals and organizations to accomplish expanded work, and increase recognition for CRC.

CRC historically has had a limited and somewhat inactive and unstructured membership. It is a detriment to organizational development in that it limits community funding, reduces the pool of candidates for volunteer opportunities and potential board members, and restricts our visibility to foundations and other institutions as sources of support. Effective organizational development requires not only effective outreach but also a more formal membership structure and well defined membership management. Building visibility in the community will enhance CRC's opportunity to draw on a wider variety of residents for volunteer programs and potential board members, and can increase funding from locals.

CRC recognizes that natural resource conservation has historically been largely directed toward a project by project approach in the past. CRC sees this as a less effective way to accomplish the big picture of a more comprehensive conservation process on a landscape wide basis. We can do a small project or we can work with other organizations on a much larger scale to address problems on an entire landscape. This allows a collaborative process that brings to bear more people, skills, ideas, information and funding sources to create a more effective overall conservation plan. It also allows CRC to work with others to expand its capabilities and make more meaningful progress on conservation targets.

## Objectives

Our objectives are to: 1) expand our membership; 2) Identify specific foundations and trusts to cultivate relationships with and encourage long term funding prospects; 3) Increase visibility with partner local and regional organizations to boost CRC's effectiveness in performing its mission and to engage in wide scale collaboration to multiply the effect of natural resource conservation strategies and apply it to a larger scale; and 4) concentrate our grant writing tactics on a specific funding strategy aimed at the most effective and productive fund development rather than a wide ranging, but indiscriminate funding approach.

## Activities

### *Manage Accessible Membership*

Building structure and managing membership are important aspects of organizational health. CRC seeks a more formal membership structure and well defined membership management process to engage a wider variety of residents for volunteer programs and potential board members. This also allows CRC the opportunity to increase funding from locals. To achieve CRC's membership objectives it proposes:

1. Redefine and reorganize CRC's membership (Who is a member and how the membership will be calculated)
2. Identify member benefits. (What benefit does membership in CRC provide?)
3. Define the difference between members and donors and develop strategies to meet the needs of, and appeal to, each.
4. Develop adequate record keeping procedures for membership and donors.
5. Determine whether paid membership is advantageous and, if so, amend organizational by-laws.
6. Provide diverse events that will appeal to members and directly engage people in the organization.
7. Reinstate or develop strategies to provide natural resource education and information for members.
8. Provide opportunities for community members and members to make a difference in our community and the conservation of natural resources.
9. Define markers for measuring membership growth success (quantity and quality).

### *Cultivate Funders*

Funding is a crucial aspect of organization health and longevity. Developing adequate funding is difficult. Cultivating and maintaining relationships with funders on a long term basis is challenging. CRC's strategy is two-fold: 1) cultivate funders, and 2) be ready to demonstrate achievements of CRC programs and projects. This will require a determined outreach process to find suitable funders, meet with their staff members, develop relationships, and consistently provide results and successes of CRC programs. It also requires that CRC demonstrate effectiveness with community visibility, show case CRC's consistent and well defined organizational strategy, and display our current and planned development of collaborative strategies that increase the effectiveness of our programs. To achieve success with funding development CRC proposes:



1. To continue identifying foundations, trusts and other potential funders that have missions that align with CRC's, and have the capacity and outlook that encourages long term engagement.
2. To identify funding organizations that provide capacity funds.
3. To continue to supplement and follow the funding spreadsheet previously developed.
4. Develop specific strategy for engaging foundations (or other funders) directly and encourage relationship building with staff.
5. Engage with and assist defining the outreach and education strategy to ensure the products of that program (films, newspapers, brochures, etc..) will be appealing to funders, and will supplement grant proposals, Letters of Intent, or at other opportunities.
6. Engage with other similar organizations to enhance and broaden CRC's effectiveness in natural resource conservation, thus becoming visible to other organizations and potential funders.
7. Continue to collaborate with NGOs that are successful in raising funds, to become educated in fund development.

#### *Cultivate Partner Organizations*

Individual projects can be very effective on a small scale, however, it is less effective on a landscape basis. Given the large scale environment CRC operates within, we believe that collaborative process will more effectively bring to bear people, skills, ideas, information and funding sources to create a more effective overall and wide scale conservation plan. It also allows CRC to work with others to expand its capabilities and make more meaningful progress on conservation targets.

This takes a great deal of time and a concerted effort to engage with outside organizations, attend meetings, and participate in project groups. But, it allows CRC to offer resources, data, and processes to others, while obtaining the same expanded resources from other groups to assist us. To pursue this strategy CRC proposes to:

1. Engage with outside organizations to develop relationships, understand the needs and capabilities of each organization and find ways to fit our skills with the skills and resources of other organizations. More specifically, this will require consistently attending meetings, offering assistance, and engaging with their staff
2. Offer assistance to outside organizations and agencies (staffing, planning, and information) who are engaged in natural resource management and/or conservation, or have resources that will allow CRC to more effectively accomplish its projects. This will enhance the overall effectiveness of CRC's and other organization's projects, encourage relationship building, and increase collaboration skill for all.
3. Seek opportunities for outside organizations to assist with our mission, which includes frequent contact with organization, agency, and staff from groups or individuals in our watershed.
4. Invite outside organizations, groups, and individuals to participate in CRC planned events, or combine efforts to put on joint events that meet the organizational mission of each. CRC must be willing to participate with other groups in ways that enhance their effectiveness and broaden CRC's visibility, outreach and effectiveness.

### *Grant Writing*

Historically CRC has pursued grant opportunities in a broad way, often pursuing funding at the last minute, without an effective strategy to develop funding or pursue each specific grant. This situation is often caused by the shortage of staffing and general lack of capacity. In order to alter this situation CRC is developing a process that will concentrate grant writing tactics toward a more well-defined funding strategy. CRC is working to define a grant writing strategy that will result in planned and effective fund development rather than a wide ranging but indiscriminate funding approach. To achieve this goal CRC proposes to:

1. Continue to develop and refine a grant matrix which identifies funding sources, defines the parameters of each, and identifies submission deadlines to avoid last minute funding surprises.
2. CRC has retained a grant writer/funding development specialist who will continue to provide support and assistance for identifying potential funding sources, and effectively drafting grant proposals.
3. Identify staffing needs consistent with organizational strategy.
4. Identify specific and general funding needs.
5. Match needs to the available foundations, trusts and other organizations.
6. Seek outside organizations which have alternative funding available and may be able to obtain funding to initiate, supplement projects funds obtained by or sought by CRC.