Executive Summary

During the summer of 2012 six polygons were defined on Chip Lakes Northwest and Northern shorelines and four polygons identified on the Lobstick River. These ten sites were assessed following the Alberta Habitat Management Society (often referred to as Cows and Fish) Riparian Health Assessment protocols for Lentic and Lotic riparian areas. The sites were conducted by Torsten Lajoie Flyng and George Bloom as a sub-partnership project within the Stewardship Alliance for Conservation Agriculture, between West Central Forage Association and Yellowhead County. The project is commonly called the Chip Lake Project. The completion of the RHA's was set out as a goal in the overall project objectives for 2012.

Following the survey technique set out by Cows and Fish, the sites were assessed for their vegetative characteristics (including canopy cover, invasive and disturbance increaser vegetation, tree and shrub establishment/regeneration, browse utilization, woody vegetation removal, human alterations to vegetation), and, physical characteristics (including the percentage of human cause alteration, severity of alteration, human cause bare ground and degree of artificial water level changes). Developing scores for each of these qualities allowed the assessors to determine the overall health of the selected sites.

In general, based solely on the sites assessed, the health of Chip Lake and the Lobstick's riparian areas seem to be in relatively good health. However, more sites will need to be assessed in subsequent years to develop a more representative area and to get a more precise understanding of the lake and river's overall riparian health.

Within the sites, polygons, that were assessed on Chip Lake there was not a great variation between sites, though some factors that were most damaging to the scoring were those of invasive weeds and human traffic. Sites that were more remote and had little human presence tended to score very well. Even sites that were devoid of human activity though were presented with various kinds of invasive weeds. However this can likely be attributed to the pervasive and prolific nature of the weeds such as Canada thistle, Perennial sowthistle and Catchweed, and in those cases they were likely present as a part of a sectional stage following a flooding event or reclaimed land from receding lake water levels. Where there was more human traffic polygons were also negatively scored in some aspects due to clear erosion or compaction issues. These sites could benefit from reduced or controlled human impact to allow for the sites to recover. Traffic is often just simply too heavy for the vegetation to sustain itself.

As for the polygons assessed on the Lobstick there was a greater deal of variation in the scoring. Some sites were quite healthy and others were very heavily and negatively impacted. The primary human caused disturbance came in the form unrestricted cattle grazing. In this respect the consequences on the riparian area was significant. Invasive weeds were present, vegetation was degenerated, woody

vegetation was non-existent in many circumstances or supplanted by non-preference species (i.e. rosebush, buckbrush, etc), soils compacted and eroded, bank stability undermined, and the river often restricted from a flood plain.

Reiteration needs to be made on the need for further assessments. However overall this season seems to suggest a need for more concerted work on the Lobstick River with a generally lower concern for Chip Lakes riparian area. Cattle grazing does not have to be inherently negative to riparian area health, but in the unrestricted format grazing can cause quite a deal of harm. If the cattle are separated from the riparian area but allowed to graze on occasion (when the ground can support their weight and vegetation can best recover) then the cattle and riparian area can stand to benefit.

Riparian Health Assessment Report on Chip Lake

Chip Lake is found about an hour's drive west of Edmonton on the Yellowhead Highway. It is 73 km² and quite shallow with a maximum depth of 1.6 meters. Locally known as Alberta's largest mud puddle, it has never to our knowledge received any kind of sampling data regarding riparian health assessments or water quality. Chip Lake is home to a wide variety of plants and animals. All these organisms interacting with physical and chemical attributes of the environment are collectively providing ecosystem services such as:

- Providing food and habitat for wildlife
- Carbon sequestration, climate regulation, waste decomposition and detoxification (filtering and buffering of contaminates)
- Water and nutrient dispersal and cycling
- Providing food for human consumption
- Cultural, intellectual and spiritual inspiration
- Recreational experiences

It is hard to affix a price on these natural services provided by Chip Lake and its riparian areas. The West Central Conservation Group in conjunction with Yellowhead County believes that they have significant value. We would like to keep these ecosystem services functioning to the best of their abilities so that future generations may enjoy Chip Lake and the resources it provides for years to come. This is why we have decided to cooperate in determining benchmark observations regarding different characteristics of Chip Lake. These benchmarks may prove to the public that by participating in a stewardship group, they may be able to assist in some way, shape or form and that good environmental stewardship can benefit everyone involved. In early 2012 Chip Lake has been accepted in the ALMS Program (Alberta Lake Management Society) which will provide watery quality sampling, lab analysis and interpretation of results.

By carrying out riparian health assessments surrounding Chip Lake and its tributaries we can engage landowners by promoting an understanding of best management practices which may ultimately increase their forage and benefit the local flora and fauna. SACA (which is a partnership of West Central

Forage Association, Yellowhead and other Counties) has put on several workshops, focus groups and educational extension events to try to garner public involvement to set in motion the formation of a Chip Lake Stewardship group.

RHA lat/long units are found in decimal degrees (hddd.dddd) using the WGS 84 datum. The reasoning for this is the Yellowhead County Web Map, which is the mapping program does not support UTM's and most staff are unfamiliar with those units. All maps are digitized aerial photos which are continuously updated on a 3-5 year rotation. All the information collected are finished in digital format to provide ease of access.

Chip 1:

This RHA was performed on the western shore of Chip Lake. The site is provincial crown land which is accessed by taking a north turn off of Highway 16 on to Range Road 110 and when the road comes to a "T" intersection an east turn will bring you towards the lake. Once the lake is in view you will continue traveling east down a bush trail (past a house on the north side of the road) and walk to the starting point on the shore. Chip RHA # 1 start point can be found at: N53.641130°, W-115.443872°. Chip RHA # 1 end point can be found at: N53.642409°, W-115.446110°.

This flat low lying area is very well vegetated with no bare ground present. There seems to be very little human activity such as livestock grazing or recreation. The area either has no fencing or has long since deteriorated. There is what appears to be a narrow quad trail which is vegetated and not heavily used, perhaps only used lightly by locals in the area.

Mature spruce, pine and aspen dominate the upland forested area while mature willows and dogwoods intermingle with the open areas closer to shore. Some major grasses present in the riparian area include: Tall Mana Grass and Reed Canary Grass. Weeds present in the polygon included: Cleavers which were prolifically found in low laying open areas. A small amount of individual Perennial Sow Thistle plants sporadically occurring was noted throughout the polygon. The classification type of this area keyed to a late seral Poputre/Cornsto because of the mature Trembling Aspens and Willows. Red Oiser Dogwoods and Goose berry shrubs were also present.

The polygon surveyed has an average width of 35m with a length of 210m. The starting and end points were determined because the riparian area was within the same property boundary and representative of the majority of shoreline of Chip Lake. Anything south of the starting point was private land and was influenced by the confluence of the Lobstick River entering Chip Lake. Chip Lake RHA # 2 is north/west of the end point of this polygon.

The RHA on this site scored healthy and in proper functioning condition overall. Vegetation scores were low because of prolific Cleavers presence. The soil/hydrology aspect scored very well as there is a low human impact on the area and on the lake itself. There are no artificial water level changes affecting Chip Lake by way of dams or irrigation.

Chip 2:

This assessment was made on the Western shore of Chip Lake. It can be accessed 1000 meters down a lease road from the termination of Township Road 541 (which in turn can be reached via Range Road 110 from Highway 16).

This site is not being used for any visible purpose outside of potential ATV recreation and hunting. It is crown land that does not appear to have any historical grazing activity in the recent past.

This polygon was rich in vegetation and variety. It had a healthy mix of vegetation ideally suited for the water's edge and drier woody vegetation in upper regions of the riparian area and everything in between. Where the polygon scored negatively when it came to vegetation was in the invasive plant species. Despite thick vegetation and a lack of human caused disturbance, there was a significant enough amount of Canada thistle, where there appeared to be flooding damage, and perennial sow thistle inconspicuous under a lot of the thicker grasses. However, most devastating to overall score was thick cleavers. It was so thick as to make it difficult to traverse some spots of the polygon as the weed binds back on itself in Velcro like fashion.

The physical characteristics of this side we more or less superb. The water was not restricted from flooding a significant riparian zone and there simply was no apparent human activity within this polygon, with the nearest trail being situated well outside of the riparian area. Dense vegetation and swamp like water's edge probably keeps most humans from considering entering this particular section of the shoreline.

There are no recommendations to be given for this site. There are no apparent activities occurring on this site and so fencing would prove useless. The weeds that are the main concern could be a symptom of some disturbance that has occurred historically and the current weeds are a stubborn remainder.

Chip 3:

This polygon can be found on the northern shore of Chip Lake. It is situated in Chip Lake Park which is run by the Ravine Community Association. It can be reached by Range Road 101A (which terminates in the park), off of Township Road 544.

The park is used for various activities from camping, to fishing. It offers boat access to the lake and the park is heavily used in the summer months for day use activities.

This site has very different characteristics to the other polygons assessed on Chip Lake. It is a very rocky shoreline (as can be seen in the Chip 3 Pictures page). The vegetation on this site is rather sparse in many segments of the polygon. The riparian area is bounded by cliffs that rise approximately 5-10 meters from the water's edge. The cliff edges are not abrupt and so more upland woody species can be found growing relatively close to the water's edge. A lot of aquatic vegetation has washed up and chokes any possibility for vegetation to grow close to the water. Some plants like touch-me-nots, sweet clovers and perennial sow thistle, have taken advantage of the high nutrients of the wash up and have

managed to grow in some locations; however it would appear that the continual disturbance that occurs from the deposit of more weeds as water levels rise and fall has kept other vegetation from really establishing. Invasive plants can be found throughout the polygon and include Canada thistle, ox-eye daisy, perennial sow thistle, scentless chamomile, and annual sow thistle. The canopy cover of each weed is relatively low but when combined make up a significant percentage. Disturbance increasers like sweet clover (which was incredibly thick for a significant section at the east end of the polygon) and strawberries and dandelions were also very dominant, especially in areas where clear human impact can be noted.

The physical characteristics of this site were significantly deteriorated. While there was extensive rock material and the significant aquatic wash up probably makes a positive difference in controlling erosion, there is a lot of human activities at the water's edge. Where rocks are missing there is bare soil where fishermen stand and cast their reels. There is also a boat launch that encroaches on the start of the polygon and cement blocks and clearing has negatively impacted the riparian areas over all health. The lakes water level is not controlled by artificial means and so the water level can rise significantly dependant rain and snowmelt. This means that the 'cliffs', very sandy in quality, have clearly been eroded over time. Vegetation that is present on the sand material is unable to retain the eroding material.

This site could only really improve if human activity is limited or completely halted. Vegetation will have a hard time growing in the limited space available between rocks but continual traffic will make it even more difficult.

Chip 4:

Chip Lake RHA # 4 is found on the eastern shore of Chip Lake, near Chip Lake Campground. This campground is managed by the Ravine Community Association. Chip Lake RHA # 4 can be found by taking Range Road 92 north through the town of Wildwood off of Highway 16. At Township road 544 take a west turn and follow the sign to Chip Lake Park which will require a south turn at Range Road 101 A. This final turn will get you to the campground. Follow signs to the boat launch and walk south along the shore to the start point at: N 53.667160°, W-115.351750°. The end point can be found at: N53.665160°, W-115.349650°.

This polygon is very well vegetated, except for a narrow foot path which is found walking south of the boat launch. This foot path quickly disappears about 30m from the boat launch area as it becomes difficult to walk with poor access to the Lake. This polygon contains no sign of human presence regarding grazing of livestock.

The upper section of Chip Lake RHA # 4 contains mature Willows, White Spruce and Trembling Aspen. The lower section of the riparian area is very well vegetated and has some Cattails, Stinging Nettle and Tall Mana Grass. Invasive plants in the polygon consist of Canada Thistle which was the most prominent weed. Ox-eye Daisy, Scentless Chamomile and Annual Sow Thistle were found in low levels. The classification type of this area keyed to a late seral Poputre/Cornsto because of the mature Trembling

Aspens and Willows. This polygon is very flat and contains a significant amount of organic material in the soil profile. This may be due to prevailing westerly winds which push along all the broken submerged aquatic vegetation on to the shore.

The polygon surveyed had an average width of 60m and a length of 264m. The starting point is found at the boat launch because it is a high use area and the end point was found at a property boundary. This polygon has a narrow width at the start which widens as the polygon progresses. This is due to a slope which tapers as it moves south.

The RHA on this site scored healthy and in proper functioning condition overall. Vegetation scores were lower because of the identified Canada Thistle in the polygon. The soil/hydrology aspect scored perfectly as there is no detectable human impact in the area, the small foot path south of the boat launch was considered but it is so small compared to the overall area of the polygon that it is not significant enough to warrant point loss. There are no artificial water level changes affecting Chip Lake by way of dams or irrigation.

Chip 5:

Chip Lake RHA # 5 is found on the eastern shore of Chip Lake, near Chip Lake Campground. This campground is managed by the Ravine Community Association. Chip Lake RHA # 5 can be found by taking Range Road 92 north through the town of Wildwood off of Highway 16. At Township road 544 take a west turn and follow the sign to Chip Lake Park which will require a south turn at Range Road 101 A. This final turn will get you to the campground. Follow signs to the boat launch and walk south along the shore to the start point at: N53.665160°, W-115.349650°, which is the end point of Chip Lake RHA # 4. This polygon is very heavily vegetated with no human impacts apparent. This is perhaps due to the difficult access by any means. The polygon is also very flat and the ground is saturated with water, some spots will submerse your foot wear.

The upper section of Chip Lake RHA # 5 contains mature Willows, White Spruce and Trembling Aspen, very similar to Chip Lake RHA # 4. The lower section of the riparian area is well vegetated which has some Cattails, Stinging Nettle and Tall Mana Grass. The main offending weed continues to be Canada Thistle with small amounts of Scentless Chamomile and Ox-eye Daisy.

This polygon had an average width of 110m and length of 165m. The Starting point occurs at the property line of separation of the Ravine Community Association and Provincial Crown Land. The end point was put in place because the riparian area starts to narrow as you travel south and becomes a slope with a very narrow riparian area and shore.

The RHA on this site scored healthy and in proper functioning condition overall. Vegetation scores were lower because of the identified Canada Thistle in the polygon. The soil/hydrology aspect scored perfectly as there is no detectable human impact in the area. There are no artificial water level changes affecting Chip Lake by way of dams or irrigation.

Chip 6:

The polygon for this riparian health assessment can be reached off of Township Road 544 off of Range Road 111. Approximately 350 meters down Twp 544 (from Rge 111) the road starts a curve to the south. From this curve on the north side of the road a lease road commences. The polygon can be reached at the end of this lease road, 850 meters. The polygon starts where the lease road intersects the lake and goes south from that point 300 meters.

This site was extremely interesting because it had a unique feature that the other polygons on Chip Lake did not have, a natural berm. The berm was excavated to help determine what it was, and it was found be made up completely of washed up aquatic material. Vegetation has completely covered the berm. On the lake side of the berm the vegetation take son very wetland characteristics. The water just about comes right up to the base of the berm and in that zone there is a thick abundance of sedges, reeds and other aquatic associated species. The berm is thickly covered by a wide range of different plants but is dominated by reed canary grass. On the land side of the berm there are far more broad leaves plants and larger woody species. No woody species are existent on the lake side of the berm but mature and immature willows, poplar, birch, aspen can be found on the land side of the berm.

Despite the berm and the clear distinction between plant communities on either side of the berm, there is very little evidence of invasive weeds. Canada thistle is the only weed to be discovered, and it was found primarily in spots that seemed to indicate water had dried up after flooding over the berm. There was a lack of other vegetation in these spots, due to shade and flooding, and Canada thistle has managed to make a strong presence in those patches.

This site is not apparently being used by humans, due probably to the inconvenience that the berm creates in access the water's edge, (except for a small private boat launch at the end of the lease road) but there is a lot of evidence of wildlife browse. None of the woody material has been left untouched and a lack of regeneration in the woody material seems to indicate that any regrowth is quickly utilized by wildlife.

Despite the clear impact that the berm has had on the site there is no human related reason for the berm and so the physical characteristics of the site score well. Water rising and falling has led to the slow deposition that has caused the berm be created. There is evidence that someone uses the end of the lease road as a means of accessing the lake with a small aluminum boat. An area has been weed wacked but use is very minimal and does not overly negatively impact the otherwise very health and lush riparian area.

This site take significant hits when one adds up the existence of some invasive and disturbance increasers and heavy evidence of browsing and significant beaver activity, and the highly minimal human presence. These are all fairly 'natural' issues and very little could be prescribed to make positive changes to this site.

Lobstick 1:

Lobstick RHA # 1 is found where the river starts to flow out of Chip Lake. It is accessed (with permission from Jodi Nero) by turning north on Range Road 93 from Highway 16. This road is a dead end and the site has a Texas cattle guard for entry found on the west side of the road about 1.5km up from the highway. This area is AESRD lease land and has a couple of horses on it. The start point can be found at: N53.61585, W-115.25900 and the end point can be found at: N53.61765, W-115.25790.

The polygon is entirely vegetated as the horses grazing in the area have more than enough in the field above the riparian areas. There appears to be a bit of browsing in the riparian area of woody herbaceous species by wildlife, possibly moose and deer. Signs of bedding down were noted in grassy areas outside of the riparian area. Mature White Spruce, Trembling Aspen and Red Oiser Dogwood are common both in the riparian area and out of it. Canary Reed Grass is prolific along with Beaked Sedge and Small Fruited Bulrush in the lower riparian area. The classification type of this area keyed to a late seral Poputre/Cornsto. Beaked Sedge with Bulrushes were common close to the shore along with dense formed mats of Reed Canary Grass with intermingling Kentucky Blue Grass. Smooth Brome was noted farther up from the riparian areas in patches.

The polygon has an average width of 15m and a length of 320m. The starting point is close to Chip Lake as the Lobstick River flows out of it, but not so close as to warrant a Lentic Riparian Health Assessment. The end point unfortunately was not at the property border due to time constraints. In the future this RHA boundary should be expanded to the edge of the property line. This area is difficult to walk through as there are many mature Willows growing densely on the upper section of the riparian area which makes surveying slow. The overall score was 84% for the site. The weeds in this polygon include: Canada Thistle and Tall Buttercup in low levels. Other than some light grazing by horses there is no human presence disturbing the riparian area. The Lobstick River is not restricted by any artificial water level changes.

Lobstick 2:

Lobstick River RHA # 2 is found by taking a north turn from Highway 16 towards the Lobstick River Resort Community on to Range Road 90. After traveling 2km from the highway there is an east turn which will take you about 250m to park. The starting point is at: N53.622700°, -115.181450°. The end point can be found at: N53.623520°, -115.181050°.

There is minimal human disturbance in this riparian area. A small quad trail runs above the riparian area in a “u” shape adjacent to the river. There are no livestock present and the area is well vegetated with no bare earth present. The area is devoid of mature trees, which is odd since across the river there is a mature forest. The property line is fenced at the start and end point of this polygon is the only areas where larger woody species are found. This area may have been cleared many years ago to plant hay. Large shrubs are absent as well. The shrubs that are present are very heavily browsed and split ends are common. Evidence of deer in the area is clear by droppings, laying beds and common sightings reported by residents in the area.

Weeds found in the polygon include: Canada Thistle and Perennial Sow Thistle. Shrubs found in the riparian area include: Gooseberry, Red Oiser Dogwood and Trembling Aspen seedlings. These woody species have an average height of 0.5m or less, which may not provide good bank stability. The classification type of this area keyed to a late seral Poputre/Cornsto.

The overall average health score of this polygon is 55.5% which equates to an unhealthy, nonfunctional riparian area. This is due to the fact that weeds are found throughout the polygon, heavy browsing and previous clearing of trees. The slope of the riparian area is also steep which may contribute to the down cutting of stream banks. The Lobstick River is not restricted by any artificial water level changes.

Lobstick 3:

This assessment was conducted on the Lobstick River, on a 500 meter stretch of the river owned by a private community association, Lobstick River Resorts. Access can be made from Range Road 90 (a.k.a. Lobstick Resort Road). The site can be reached via a footpath 500meters from the terminus of the Lobstick Resort Road. The Lobstick River, as is characteristic of many water ways in this region, meanders significantly, and so the site was chosen to reflect a North/Western bank of the river. The severe bow in each meander means that the river has a drastically different impact on the riparian zone. Vegetation and physical characteristics have the potential of being radically different and so it was deemed important to delineate into two polygons what would under normal Lotic Riparian Health Assessments be assessed as one long polygon (see Lobstick 4 for comparison).

The quarter section that the polygon is found on is rented to an external rancher and used as a grazing cell along with an adjacent quarter to the north. This site is very heavily grazed due to extensive grazing management, and the cattle have free access to all land available on the quarter section west of the Lobstick River. The cattle are grazed on the quarter for several months and in this time period there is very little to no rest for the vegetation.

The vegetation on this site is indicative of heavy grazing and browsing but also of flooding as the river breaks it banks. Non preferential species, such as rose bush and snowberry are prevalent and are the predominant brush species. These species are however also heavily browsed by cattle and potentially wildlife as well. Timothy, smooth brome and reed canary were the most common grasses; however nothing has been left untouched by grazing. Invasive weeds were found, tall buttercup, scentless camomile and Canada thistle. Canada thistle was found in significant patches throughout the polygon. Tall buttercup and Scentless camomile were more spread out, Scentless camomile was found predominately by the waters edge in lower infestation levels. Willows can be found at a great extent from the river and seem to be sustained by seasonal flooding. Willows have been browsed to the extent that umbrella shape has started to occur. Reed canary patches can also be found well back from the river where moisture has been trapped in slews feed, apparently, only be rain or occasional flooding.

This site has experienced extreme human pressure through grazing and potentially logging. The cattle have free range on the quarter and have physically altered the water's edge with several direct access points to the river for watering, causing hummocking, pugging and compaction. Cow trails have been

established along the bank that has increased bank destabilization. Adding to the concern is a lack of vegetation to secure bank material and so sloughing has occurred and extensive erosion is ongoing in the meanders of the river and at cattle access points.

This site is non-functional/unhealthy and was scored very negatively due to a number of factors. Vegetation has been heavily and negatively grazed to the point where there no longer is any significant root matter, grass or woody species, to hold the bank material making the river's edge highly susceptible to erosion. Uncontrolled grazing has led to soil exposure at points that cattle routinely use, i.e. direct access to river, bedding, and trails.

Due to the highly deteriorated nature of this site the only means where by significant change could occur would be to fence off the riparian area and give it a significant portion of time to recover. Fencing with access points should be considered as the riparian area would be a highly beneficial grazing zone, but access would have to be controlled and only after the riparian area has reached a level of health that could support cattle pressure for measured amounts of time.

Lobstick 4:

This assessment was conducted on the Lobstick River, on a 500 meter stretch of the river adjacent to Lobstick RHA Polygon #3. It is owned by a private community association, Lobstick River Resorts. Access can be made from Range Road 90 (a.k.a. Lobstick Resort Road). The site can be reached via a footpath 500meters from the terminus of the Lobstick Resort Road. The Lobstick River, as is characteristic of many water ways in this region, meanders significantly, and so the site was chosen to reflect a South/Western bank of the river. The severe bow in each meander means that the river has a drastically different impact on the riparian zone. Vegetation and physical characteristics have the potential of being radically different and so it was deemed important to delineate into two polygons what would under normal Lotic Riparian Health Assessments be assessed as one long polygon. (see Lobstick 3 for comparison)

The quarter section that the polygon is found on is rented to an external rancher and used as a grazing cell along with an adjacent quarter to the north. This site is very heavily grazed due to extensive grazing management, and the cattle have free access to all land available on the quarter section west of the Lobstick River. The cattle are grazed on the quarter for several months and in this time period there is very little to no rest for the vegetation.

The riparian area for this polygon, as far as our assessment could deduce, has been extremely limited by an incised river bank. As the Lobstick makes a bend from south to east it has eroded a significant barrier to extended access to a larger riparian zone. Any species indicative of the riparian area have for the most part been restricted, through successive years of water being cut off from flooding a wider area, to the steep river bank. Grasses such as timothy and smooth brome are the primary grasses in the pasture. Reed canary can be found on the river bank and some sedges are also located right at the water's edge (where the cattle no longer can gain access to the bank structure). Only a nominal amount of willows can be located in this polygon, and generally they are only situated where the cattle can no longer

access them, once again due to bank instability. Canada thistle and Tall buttercup were the only weeds identified in this polygon. Canada thistle was found in significant patches throughout the polygon, Tall buttercup was more singularly located throughout the polygon, particularly present where soil was disturbed.

This site has experienced extreme human pressure through grazing and potentially logging (logging is conjecture though but a striking absence of trees and such open pasture would likely indicate land being cleared to support grazing). The cattle have free range on the quarter and have physically altered the water's edge with a singular direct access points to the river for watering, causing hummocking, pugging and compaction. Due to the situation that this polygon can be found where the river takes a bend to the south/east, the river has cut away significant amounts of bank material. Ineffectual vegetation does little to prevent further erosion and as soil is transported from the bank at the water level the upper portions of the bank have fallen and settled into a layered sloughing. This cuts cattle off from access to the river, but the compaction from the sloughing and major disturbance from shifting soils seems to be keeping more woody vegetation from establishing.

This site is non-functional/unhealthy and was scored very negatively due to a number of factors. Vegetation has been heavily and negatively grazed to the point where there no longer is any significant root matter, grass or woody species. However in the case of this polygon, the physical characteristics of the site are the more major concern. The river have been cut off from the river and this might allow for more beneficial vegetation to establish, however as noted above, this does not seem to be the case as the disturbance form erosion is just too great.

The recommendations for this site follow the same lines as the adjacent polygon, Lobstick3. The only means where by significant change could occur would be to fence off the riparian area and give it a significant portion of time to recover. Fencing with access points would not really be beneficial, unless you fence well back from the river, as the physical characteristics of this site would not afford the riparian area as a grazing cell.