

SUMMARY OF COMMENTS/RECOMMENDATIONS

PROPONENT: Central Manitoba Resource Management Limited

PROPOSAL NAME: Sundance and Deerboine Irrigation Project

CLASS OF DEVELOPMENT: Two

TYPE OF DEVELOPMENT: Water Development and Control

CLIENT FILE NO.: 4621.00

OVERVIEW:

The Proposal was received on May 3, 2001. It was dated May 3, 2001. The advertisement of the proposal was as follows:

“A Proposal has been filed by Central Manitoba Resource Management Ltd. (a holding company formed by Central Manitoba Irrigators Association Inc.) for the development of two irrigation projects. The Sundance project would irrigate approximately 520 acres annually in rotation on a land base of 1580 acres. The land is located between the Assiniboine River and the Trans Canada Highway west of Kemnay in the Rural Municipality of Whitehead. The Deerboine project would irrigate approximately 650 acres of land annually in rotation on a land base of 1960 acres. The land is located north of the Assiniboine River and south of Rivers in the Rural Municipality of Daly. Water for both projects would be obtained from the Assiniboine River.”

The Proposal was advertised in the Brandon Sun on Saturday, May 19, 2001, It was placed in the Main, Centennial, Eco-Network and Western Manitoba Regional Library (Brandon) public registries. It was distributed to TAC members on May 14, 2001. The closing date for comments from members of the public and TAC members was June 14, 2001.

COMMENTS FROM THE PUBLIC:

Wayne and Joan Lenfesty

We live on 86 acres on S 27-10-21W in the RM of Whitehead, which will be adjacent to some of the property that will be part of the Sundance project. We are not for or against the proposal, but we would like to express our concerns. We have discussed our concerns with Mr. Bob Mazur so he is aware of them. We want to make it real clear that we are not against the project as we are farmers also, and we are not in any way trying to stop

this project from going ahead. Our main concern is for the water supply for ourselves and our livestock. We obtain our water from a shallow well located at our yardsite in SE 27-10-21W. The water table can vary from six feet to 25 feet depending on the amount of runoff and rainfall each year. There are several wetland areas in and around our property which we assume contribute to the replenishing of this small shallow aquifer. We have two concerns in regards to what effects this project may have on our water supply.

1. Quantity – will the draining of some of these wetlands to accommodate the irrigation pivots affect the supply of water in the aquifer? 2. Quality – Will fertilizers and pesticides/herbicides leach into the aquifer affecting the safety of the water? When we moved to this property in 1994 there was a high concentration of nitrates in the water. We have sowed all our land to forages and do not use chemical fertilizers. Since 1994, the nitrate levels have dropped in the water. Did our actions cause this or is it coincidence? Will the increased use of fertilizers and chemicals have a negative effect on the water supply?

We have one other concern as well - the aerial application of chemicals. We know that potato growers have to use planes to apply the chemicals that are needed to protect the production of their crops. Once again, we are not trying to interfere with this practice, but we have a concern for our health and well being as well as the plants where we live. Last year the planes had to travel directly over our yardsite when making turns. The tops of a lot of the trees in the yard started curling up and dying. Whether this was the cause or not we are not sure. But why has this only happened in the years when the plans were active? These planes are also very noisy, fly at very low levels and usually are active in the early mornings and late evenings when the weather is calm. It would be very beneficial if residents who will be affected be notified with a phone call at least a half hour before it takes place. In our case it would be for safety reasons. We ride horses in the evenings and on one occasion while giving a granddaughter a ride, a plane appeared right over our barn resulting in a very spooked horse. Luckily no one was hurt, but there were some very scared people for a while. We would curtail our riding activities until the spraying was done if we knew it was to take place.

Disposition:

Additional information was requested concerning the shallow local aquifer, and nutrient management. A copy of the letter was provided to PFRA (representing the proponent) for followup concerning aerial application practices.

Lindy Clubb

I am disappointed to learn of the resurrection of the plans to syphon off more water from the already compromised Assiniboine river - (Public Registry file 4621.00). As part of the original opposition to allocation of this river's water nothing has come along to change my mind. In fact, more has come through recent concerns of erosion, sediment loss, lack of storm water controls, pollution from hog operations, and counting the losses of spawning and rearing habitat for fish bearing waters. Among others.

Given the Federal initiatives and concern we both learned about in Ottawa recently, I predict the people from Environment Canada will not be pleased about the ability of this river to deal with its nutrient load, if more of it is taken for agricultural (profits for potato producers) purposes.

In the absence of adequate information, research, and basin planning exercises, in the presence of increasing demands on our fresh water and the need for basic in stream flows and less water diversions in the southern half of our province, I do believe that users should turn elsewhere for more supplies - perhaps they could limit irrigation to what we waste domestically for supplies, instead of always wanting more. And then there is the issue of soil salinization as a result of irrigation.

We need informed decision making. It may be difficult for us to find a balance between using and abusing our water, but it's possible. Try just saying "No".

Disposition:

These comments reflect a general concern about water development projects and water allocation. One of the objectives of the environmental assessment process is to ensure that project impacts are fully identified and that mitigation actions are planned where possible. The availability of water for allocation to this project is not in question, and is being addressed through the Water Rights Act licencing process. Accordingly, no additional information is needed in the environmental assessment process to address these comments. A response will be provided to the writer discussing water allocation issues in more detail.

COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:

Manitoba Conservation – Sustainable Resource Management The proponent will need a Water Rights Licence in order to withdraw water from the Assiniboine River. It would be preferable if the allocation of water could be deferred until the instream flow needs assessment presently being carried out is finished. This would ensure that the proponents would not potentially be subject to a significant change in allocation and/or operating conditions within a short time of receiving a Water Rights Licence. If the proposal is approved and water is allocated through a licence, it should be clear that the allocation is temporary, will be reviewed when results of the instream flow needs assessment are available, and may be altered at that point.

River water sampling only occurred on one day (December 19, 2000) and this data was not necessarily of the water quality at the time of irrigation. Orthophosphate, which is only a fraction of the phosphorus present in the water column was measured. Total phosphorus (particulate and dissolved) would be more appropriate. Neither phytoplankton nor periphyton measurements were taken during the initial sampling. The algal and macrophyte should also be monitored along with the water quality variables before and after irrigation to ensure that the effect of reduced water levels is in fact insignificant.

In the Deerboine report, the following statements are made regarding domestic wells: “low permeability units will provide some protection from the direct impact of cropping units” and “protective layers of low permeability clay or till soils are often absent in the subsurface across the project.” The consequences of this should be monitored.

Disposition:

Water Rights licencing for the projects is already being pursued by the Proponent. Standard clause wording in an Environment Act Licence addresses the matter of water allocation where instream flow needs have not yet been established. The remaining comments involve monitoring, and can be addressed through monitoring conditions in an Environment Act Licence.

Historic Resources Branch No concerns.

Mines Branch No concerns.

Highway Planning and Design No objections with this project. No new water will be allowed to enter Highway right-of-way. Natural groundwater levels will not be raised sufficiently to affect the integrity of Highway embankments or cause maintenance problems. Any alterations to the system due to highway upgrading will be the responsibility of the applicant. The MHGS contact in this regard is the Technical Services Engineer in the South Western Region.

Disposition:

These comments have been forwarded to the Proponent for information.

Community Planning Services During my review, I have referred to office aerial photographs and to irrigation suitability maps for each municipality within a report titled "Soils and Terrain - An introduction to the land resource" published by the Centre for Land and Biological Resources Research - Manitoba Land Resource Unit. My comments are as follows:

1. Municipal Roads - The proponent should seek the approval of the municipality for those portions of the pipeline alignment which are to be located within the rights-of-way of municipal roads, as they represent a structure located in the right-of-way. Other than this, no specific municipal zoning approvals appear to be needed.
2. Navigation Safety - The position of the floating pump intake in the river may represent some concern, if not hazard, for watercraft using the river. Suitable marking of the float platforms, and any guywires anchoring them to the shoreline, and perhaps advance warning signs, might be appropriate.

3. Flood Risk - If possible, any storage or service buildings related to the intake system should be located above the 100 year flood level, particularly if they will be used for storage of fuels or other hazardous material.
4. It appears that a small gully originates in the northern portion of SW 25-10-21W, extending northerly to the Assiniboine River. This may cause some concern for the operation of a centre pivot system in this quarter section - not only in terms of the mechanical operation of the system, but in the drainage of irrigation water into the river.

I have a few reservations about matters of (a) water allocation and (b) suitability of the proposed areas in the R.M. of Daly for irrigation. The report referenced in the introduction indicates that almost all of the proposed irrigation areas in the R.M. of Daly are rated as poor in terms of irrigation suitability, and the proponent's report indicates that there is an indication of nitrogen build-up in the subsoils at this time. I bring these matters forward for further consideration and evaluation by appropriate personnel in other departments.

Disposition:

These comments have been forwarded to the Proponent for information. With respect to navigation, Canadian Coast Guard requirements must be met. As the Proponent has recently installed similar intakes in the Assiniboine River, these requirements have been incorporated in the design of the intake structures. No permanent floodable works are required for the project intakes. The gully in SW 25-10-21W is wooded between the field proposed for irrigation and the river, a distance of approximately 1.6 km. As a result, given the planned irrigation water applications, there is little possibility of direct runoff from the field to the river. The vegetation should provide filtration for agricultural fertilizers and pesticides as well as sediment.

Soils and Crops Branch Within the Land Assessment for Irrigation Development Report, AXYS Agronomics indicated that the report provides a detailed soil landscape inventory at a survey intensity level 2, producing a soil-landscape map at a scale of 1:20,000. It should be noted that the detailed soil mapping conducted for the "Land Assessment for Irrigation Development - Deerboine Holding Co. Ltd." does not contain the information deemed necessary by Manitoba Agriculture and Food to be considered a detailed soil survey.

Peter Haluschak, with Manitoba Agriculture and Food, has indicated four key elements of a detail soil survey that are essential for the correlation of soils within and adjacent to mapping areas, for consistent and reliable soil interpretations, and for the continual enhancement of databases for many other applications.

1. Numerous soil physical and chemical analysis are required to verify and correlate field characterization of soil properties and to assign soil series names to site inspections with a high degree of reliability or confidence when conducting detail soil surveys. Selected samples should be analyzed for:

- a) particle size (pipette method, removal of salts and organic matter)
 - b) pH (0.01M CaCl₂)
 - c) CaCO₃ equiv. (calcite and dolomite fractions)
 - d) organic carbon
 - e) EC (saturated paste method) in areas where salinity may be present
2. Comprehensive physical and chemical analysis should be conducted on profile samples that represent soil series within the mapping area.
 - a) Analysis listed in item 1, plus analysis for CEC, ex. cations, and other analysis for specific interpretations.
 3. Field measurement of properties such as field capacity and saturated hydraulic conductivity for selected soil series.
 4. Deep drill inspections (2 to 3 m) for texture and uniformity of substrata.

With reference to the mapping and interpretation of soils in two reports, Land Assessment for Irrigation Development-Deerboine Holding Co. Ltd. and Land Assessment for Irrigation Development-RGM Holdings, a number of the Irrigation Suitability and Agricultural Capability Ratings stipulated by AXYS Agronomic in Table 7.9 and Table 7.19 are not consistent with ratings used by provincial staff. From what I understand, this concern has been identified in previous discussions with staff from AXYS Agronomics.

The following are two examples relating to the interpretation of several soil series for Agricultural and General Irrigation Suitability Ratings.

- a. Table 7.9 in the Deerboine report - Irrigation suitability ratings for the Brownridge, Porple and Prosser are 2k (Good), whereas a rating of 1A (excellent) has been assigned to these soils by qualified and experienced professionals of the Agricultural Resources Section, (Manitoba Agriculture and Food) based on extensive evaluation of databases that relate to physical and chemical properties, and field measured soil-moisture characteristics.
- b. Table 7.19 in the Deerboine report -The Wheatland series is rated as 4m for Agricultural Capability and 4m for Irrigation Suitability. However, this soil is rated as 5M for Agricultural Capability and 3m for Irrigation Suitability based on current interpretations used by the Agricultural Resources staff in Manitoba.

Finally, the Department does not agree with the last paragraph of **Section 9.6 Irrigation Suitability Classification vs. Land Suitability for Irrigated Potato Production Classification** on page 36 of both the Land Assessment for Irrigation Development-Deerboine Holding Co. Ltd. and the Land Assessment for Irrigation Development-RGM Holdings reports. The Potato Irrigation Suitability Rating involved a more rigorous and comprehensive approach to rating irrigation suitability of land resources than the General

Irrigation Suitability Rating system and therefore is more appropriate for use in assessing the capability of land for irrigated potato production.

In closing, Manitoba Agriculture and Food would like to emphasize that any projects involving soil mapping, correlation and interpretations of soil resource information in Manitoba should meet the standards and criteria that are compatible with soil mapping and interpretation program/activities of provincial soil resource staff for quality control of our provincial database. Interpretations must be Series based for province wide consistency (recognizing climatic boundaries, etc.).

Based on the information collected for the land and agronomic assessment, the impact of irrigated potato production on the soil resource is viewed as sustainable assuming that conservation farming practices are carried out. Zero tillage and minimum tillage in non-potato years will help to preserve organic matter and reduce erosion. Cover crops could be used on sandier soils, along with the use of cereals and alfalfa in the rotation to help minimize any risk of erosion and maintain current organic matter levels. Also, spreading straw or manure could be adopted for areas prone to severe wind erosion.

Good irrigation and crop production practices are key elements in protecting groundwater. Scheduling of irrigation will provide water to the crop when needed to ensure efficient use and minimize leaching and water table elevation. Fertilizer and pesticide applications will be applied at rates required, based on soil and crop analysis. With proper land management, the potential impacts of irrigation on groundwater are mitigable.

Disposition:

These comments have been forwarded to the Proponent for information. As noted in the comments, the project is considered to be sustainable with respect to the soil resource provided that conservation farming practices are carried out. This can be addressed as a licence condition.

Manitoba Health - Marquette, Brandon and South Westman Regional Health Authorities – Medical Officer of Health Monitoring of groundwater and surface water is addressed in Section 6.0 of both documents. Monitoring of domestic wells should be included in the proposal as well.

Disposition:

Domestic well monitoring can be addressed as a licence condition.

Canadian Environmental Assessment Agency It is still unknown if the application of the Canadian Environmental Assessment Act with respect to this project will be required. The Department of Fisheries and Oceans review of the project is not yet complete and therefore they are unable to make a determination at this time. Environment Canada, the Canadian Coast Guard and Natural Resources Canada have stated that they would be able to provide specialist advice. (CCG indicated a desire to participate in the provincial

review of the project, and that an application for a floating pump platform would be required.)

Fisheries and Oceans DFO comments were not available as of July 18, 2001. As the comments are likely to involve screening and sediment control matters, all anticipated concerns can be addressed through licence conditions. It is expected that DFO comments will be received prior to the finalization of an Environment Act Licence for the project, and so additional DFO comments can be accommodated during the review of a draft licence for the Development. CCG application requirements can be addressed as a licence condition.

ADDITIONAL INFORMATION:

Information to address the concerns identified in the preliminary review of the Proposal was requested on June 26, 2001. The attached information was provided. This information is sufficient to address the concerns.

PUBLIC HEARING:

No members of the public commenting on the Proposal requested a public hearing. Accordingly, a public hearing is not recommended.

RECOMMENDATION:

All comments received on the Proposal which require action have been addressed in the additional information or can be addressed as licence conditions. Therefore, it is recommended that the Development be licensed under The Environment Act subject to the limits, terms and conditions as described on the attached Draft Environment Act Licence. It is further recommended that enforcement of the Licence be assigned to the Western Region.

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