

Standing Committee on the Alberta Heritage Savings Trust Fund Act

9:02 a.m.

[Deputy Chairman: Mr. Jonson]

MR. DEPUTY CHAIRMAN: Good morning, everybody. I'd like to welcome members of the committee and our guests to the heritage savings trust fund committee meeting. Today we are dealing with matters coming under the Department of the Environment. The two active programs which we will deal with are the irrigation headworks and main irrigation systems improvement and the land reclamation program.

I'd like to welcome the Hon. Dick Fowler and his officials this morning. The acting minister is here. With his heavy workload and these additional duties we thank him very much for coming to the committee meeting. I know the committee members appreciate that. I would ask the minister if he wishes to introduce his delegation and make any opening remarks, and then I'm sure the committee members will have questions to the minister. Mr. Minister.

MR. FOWLER: Thank you very much, Mr. Chairman, and good morning to you and to members of the committee. I of course would like to introduce the officials from Alberta Environment. We have on my immediate right the deputy minister of the department, Mr. Vance MacNichol. On my immediate left we have Peter Melnychuk, who is the assistant deputy minister of water resources management. We also have on the far left Mr. Larry Brocke, acting director for the land reclamation division. All of you know my executive assistant, John Szumlas.

Ladies and gentlemen, I spent considerable time last night pondering what lucky star I was born under to be able to come before you two times within a month. Then watching the newscast last night, I saw the former minister -- what do we refer to the him as? -- opening some plant or something in western Alberta as the Minister of the Environment, I'm sure. So I really became convinced that it was indeed a lucky star that I could be here this morning as acting minister while the other minister gets to open other plants and whatnot.

As you're all aware, Alberta Environment is responsible for two important programs, namely the irrigation headworks and the irrigation systems improvement program, which incidentally has now been renamed the water management systems improvement program, effective April 1, and also the land reclamation program.

Mr. Chairman, first I'd like to give a brief overview of the water management systems improvement program. As in previous years it has been found useful to distribute these progress status maps of the projects under the water management systems improvement program members, and Mr. Szumlas will distribute them as soon as I've completed my opening remarks.

As of March 31 this year, approximately 86 percent of the project work under the program has been completed. The total expenditures under this program to March 31, 1992, amount to approximately \$503 million, with \$30.6 million expended in the '91-92 fiscal year that's being reviewed.

The primary objective of this program, initiated by the government in 1980, is to ensure adequately sized, efficient, and reliable water supply delivery systems to all the 13 irrigation districts and to the Berry Creek region in special areas to meet existing and expanded demands for irrigation and for other multiple uses. Mr. Chairman, irrigated agriculture is a vital component of the socioeconomic environment in southern Alberta. Currently over 1.4

million acres of land are being irrigated in that region, or about 4 percent of the province's cultivated land base. The irrigated agricultural land produces about 20 percent of the province's gross agricultural revenue.

Approximately 1.3 million acres of the 1.4 million mentioned under irrigation in southern Alberta are contained within the 13 irrigation districts. Some of the headworks systems that supply water to these districts have been in operation for 70 to 80 years and were in badly deteriorated condition. When the province assumed responsibility for most of these water management systems in 1974, it was found necessary to rehabilitate, modernize, and upgrade the system in order to continue to provide the services so vital to the region. That is what this program is all about. Mr. Chairman, these water management systems provide a dependable water supply not only for irrigated agriculture but also for a wide range of multiple uses, such as domestic water supply for area residents, water-based recreational facilities, wildlife enhancement, municipal and industrial uses.

Construction of all the off-stream storage reservoirs under the program has been completed. Reconstruction of the Lethbridge Northern headworks main conveyance system and rehabilitation of the St. Mary River irrigation district's main canal are now complete. Replacement of the Pinepound coulee siphon in the Waterton-St. Mary headworks and the West Arrowwood siphon in the Carseland-Bow headworks have been completed and are functioning. The rehabilitation and improvement work on the Western and United headworks systems is ongoing and is about 72 percent and 50 percent complete respectively. The construction work on the Eastern irrigation district main canal's rehabilitation program is progressing well and is about 74 percent complete.

Now, turning to the land reclamation program, members may be aware that this program is in its fourth year of a five-year approval. Since it has been one of the most popular and successful programs with the municipalities, I understand the Minister of the Environment intends to approach his colleagues in the near future for a renewed and expanded mandate to ensure that this province continues to reclaim the scars and contaminated sites on Alberta's landscape and to continue with associated needed research.

The essence of this program, which is so popular with the municipalities, is reclaiming derelict Crown and municipal lands in the province. This program provides employment to many local contractors and assists the municipalities in reclaiming abandoned landfill sites, sewage lagoons, gravel pits, industrial disturbances, water reservoirs, mine hazards, et cetera. To date nearly 1,400 of these types of abandoned sites have been reclaimed to a variety of beneficial uses. Most land is reclaimed to agricultural capability. However, many sites are reclaimed to alternate land uses. Some past examples of these alternate land uses are: an abandoned coal mine was reclaimed and then developed into a golf course and parkland at Cardiff by the municipal district of Sturgeon, an abandoned sewage lagoon to a walleye fish rearing facility now operated by fish and wildlife in Lac La Biche, and one project nearing completion is an abandoned water reservoir in Legal which is being reclaimed to provide for development into an urban park with a trout pond. As well, a program to educate the public on caring for the land is being developed. To date separate components from kindergarten to ninth grade have been completed. A high school and adult program is presently near completion with a land reclamation video for television and school use in the developmental stage.

A second component of this program to carry out research that will improve reclamation methods: determine methods that minimize land disturbances and develop methods for ensuring prompt and accurate certification of reclaimed lands. This research has focused on four main areas: plains coal mining, mountain and

foothills coal mining, tar sands mining, and conventional oil and gas. Research to date has provided information on major problems; for example, subsoil replacement depths for plains coal mines, effects of mining on groundwater, guidelines for pipeline soil handling, and chemistry of drilling wastes. It also has produced some 73 technical reports, some of which are becoming classics within the reclamation field.

During the 1991-92 fiscal year a total of \$2.2 million was expended under the land reclamation program. Of that, \$488,000 was expended in research, and the balance of \$1.7 million was on actual reclamation projects. A total of 75 reclamation projects, mostly abandoned landfills, were undertaken in the '91-92 fiscal year.

That concludes my introductory remarks, Mr. Chairman and ladies and gentlemen of the committee.

9:12

I want to say, Mr. Chairman, as the committee is very much aware, that I am the Acting Minister of the Environment. I make a presumption in coming before the committee, sir, that the reason for our appearance is to give the committee the opportunity to question the department on its activities, on its efficiencies, where it's been and where it's going, and any other questions they have in respect to these particular programs. I do not flatter myself and believe that the committee members truly feel that I have intimate knowledge on any of these programs as the Minister of Municipal Affairs acting in the capacity of Acting Minister of the Environment. Having this in mind, I want to say at the outset that in almost all instances the questions put by committee members will be answered by departmental officials who have the expertise to give the information and answer the questions in a manner which will in fact develop the information which they require and want and see as part of their duty as members of this committee.

Thank you.

MR. DEPUTY CHAIRMAN: Thank you.

Moving to members of the committee and their questions, first of all, the Member for Wainwright.

MR. FISCHER: Thank you, Mr. Chairman, and good morning to the minister and to the department folks. It's a pleasure to see you out this morning. Thank you, Mr. Minister, for being the acting minister today so that we could complete our heritage fund studies. My question is regarding the land reclamation program. We have spent \$2.2 million. You mentioned half a million or \$400 million and some regarding research. One point seven million dollars doesn't seem like very much when we think of the many projects in this province that need to be reclaimed. I was noticing that last year a bit more money was spent. Do you or the department people feel that we are spending enough money or getting caught up on reclaiming our projects, or are we still leaving a lot of projects out there that will have to be cleaned up in the future?

MR. MacNICHOL: Mr. Chairman, I'll try to answer that. First of all, the projects under this program are not very expensive, relatively speaking. The kind of work that we do -- the reclamation of garbage sites, abandoned gravel pits -- we're able to do a lot with a small amount of money, plus the municipalities get involved and help. So it's a pretty cost-effective program. But I should say that there's still a big demand there for that program.

MR. FISCHER: You did mention sewage lagoons and landfill sites. Are you finding that there's a lot of underground contamination with that that has to be dealt with?

MR. MacNICHOL: In some of the old landfill sites we have to be very careful. We do quite a thorough investigation. It's rare. I'd say that about 10 percent of the sites have to have some special remedies addressed, but it's not as bad, you know, as what you read in the newspapers. It's a small percentage of the sites.

MR. FISCHER: Certainly your monitoring system -- you would have wells to check with the groundwater around those particular sites?

MR. MacNICHOL: Mr. Chairman, that's right. We do a careful monitoring of the sites. There's the odd one. One here in Edmonton did show signs. It was an old garbage site that was reclaimed that did have some things in it that were leaching outside the site, and we corrected it.

MR. FISCHER: Is that the total responsibility, then, of the heritage trust fund?

MR. DEPUTY CHAIRMAN: That's one question too many, hon. member.

MR. FISCHER: Oh. Well, I might have lumped two together, Mr. Chairman.

MR. DEPUTY CHAIRMAN: Perhaps you'd like to go on the list again.

The Member for Westlock-Sturgeon.

MR. TAYLOR: Thank you, and good morning, Mr. Minister and all his assistants. I notice you're missing a female assistant here. I thought that'd be one of the first things you'd do to try to modernize that department. You've only got 30 days.

MR. DEPUTY CHAIRMAN: Order. Does the hon. member have a question, please?

MR. PAYNE: That's one.

MR. TAYLOR: Well, he just doesn't look like a Mr. Clean, Mr. Chairman.

Looking at the map, I was just wondering. I've read that there were projects intended for the Red Deer River, yet I see nothing in red for the Red Deer River. Could one of the assistants, Mr. Minister, tell us whether any funds are being budgeted for irrigation studies or irrigation work on the Red Deer River?

MR. MELNYCHUK: Mr. Chairman, in this budget and in this program there are no irrigation projects that are in the Red Deer River basin at this time.

MR. TAYLOR: In this budget? I see. Thank you.

The second thing is that I note the minister mentioned the budget's 86 percent complete, that \$530 million has been spent. When do you anticipate the last 14 percent? Are we in the last year? How long is it going to take to spend the last 14 percent?

MR. MacNICHOL: Mr. Chairman, after this fiscal year there are two more years of the program with an estimated expenditure of \$48 million in those two years.

MR. TAYLOR: Secondly, then, is any work being done on a carry-on from this program, or am I too early yet?

MR. MacNICHOL: Mr. Chairman, there are concerns and people asking about it, but I have nothing to report. I mean, there are demands that the program continue, but we have no direction as yet.

MR. TAYLOR: Strike while the iron is hot. This is an easy minister.

MR. DEPUTY CHAIRMAN: Thank you.
The Member for Athabasca-Lac La Biche.

MR. CARDINAL: Thank you very much, Mr. Chairman. Under the land reclamation program I know you do gravel pits. I just wonder what the status report is on that overall program now in relation to how much we've done in that area and how much is left to do with the program.

MR. BROCKE: We have done a fairly large number of derelict sand and gravel pits, Mr. Chairman. Those kind of filter in slowly. They're not a large percentage of our number of projects. Our main projects are abandoned garbage dumps and landfills.

MR. CARDINAL: Okay; thank you. That's my question.

MR. DEPUTY CHAIRMAN: That's it.
The Member for Edmonton-Beverly.

MR. EWASIUK: Thank you, Mr. Chairman. I appreciate the minister coming here today as acting minister. Obviously, the minister who is on television has more public appearances, and perhaps you're not going to get that here today, but nevertheless I'm pleased to see you here. The question I have you didn't address in your report this morning. It seems to me that when we were talking with the minister last year, he mentioned that you had introduced some type of fish into the channels in the irrigation project that were supposed to help keep them clear. I believe it might have been just a pilot project. How is that going? Is that continuing? Are you using those fish still to keep them clean?

MR. DEPUTY CHAIRMAN: I guess we could pursue this briefly, but really the responsibility of Environment is not dealing with this particular program. Nevertheless, they may give us an update. Go ahead, sir.

9:22

MR. MELNYCHUK: Mr. Chairman, one of the problems that has existed for a long time in southern Alberta is the growth of weeds in the irrigation canals, and this has all kinds of problems with the delivery of water and the measuring of water and so on. On an experimental and pilot basis the Department of Agriculture jointly with the fish and wildlife division is carrying out experiments with carp. That's a fish that just seems to love the weeds that grow in those irrigation canals. The difficulty in this is to ensure that those fish don't propagate throughout the province, because it could impact other species. The experiments are very carefully being monitored. We're into the third year of this experimental pilot project. It seems to be very successful. The fish are being sterilized so that they don't reproduce, and in that way there's control on the species. The experiment looks successful. We think that's a very environmental way to deal with this weed problem as opposed to using herbicides or those kinds of chemicals.

MR. EWASIUK: It would be cost effective as well.

MR. MacNICHOL: Indeed it is.

MR. EWASIUK: My second question is relative to the land reclamation. I of course appreciate the fact that you said that these costs aren't really excessive, but I was wondering. The ownership of some of the sites that have to be reclaimed must be known to the department. Do you make any attempts to recover some of the costs from previous owners?

MR. MacNICHOL: Yes, we do. The answer is strictly yes. We're mainly involved with municipal projects or orphan sites. That's where we're involved. The private owners of these sites are responsible for reclaiming them.

MR. EWASIUK: Thank you.
Thank you, Mr. Chairman.

MR. DEPUTY CHAIRMAN: The Member for Stony Plain, followed by Lloydminster.

MR. WOLOSHYN: Thank you, Mr. Chairman. I, too, would like to welcome our minister and his entourage. The land reclamation project I don't have any problems with as such. What I would like to know is: under this particular program what kind of involvement is going on as a joint venture; for example, with Suncor to determine what's going to happen with their tailings pond? Under this program I notice it's municipal sites, Crown land, and then orphan sites, and I've got a concern that we might have one heck of a large orphan site in years to come up around Fort McMurray.

MR. MacNICHOL: Mr. Chairman, the answer to that question is that we do jointly fund. Industry is spending money on researching those tailings ponds. We're jointly doing the work together. So there is work under way.

MR. WOLOSHYN: Under this program?

MR. MacNICHOL: Under the research program, right.

MR. WOLOSHYN: A part of that \$2 million?

MR. MacNICHOL: Yes. We spend on research a little under \$500,000 a year. It's part of that \$500,000. We will hand out later the details of that research project.

MR. WOLOSHYN: Another activity that's extremely prevalent in Alberta is strip mining. There seems at least over the past 20 years to have been limited direction in the method of mining leading to the reclamation in terms of how the overburden was taken off, where it was placed, and the slopes for agriculture, if you will. What kinds of initiatives have been involved, say specifically with TransAlta over in the Sundance mine, to look at the surface land use after they're finished in terms of getting the soil back to being agriculturally sound? Quite frankly, first of all it was marginal to begin with, but secondly, in the mixing during the excavation they can't keep it separate.

MR. MacNICHOL: Well, Mr. Chairman, I'd ask Mr. Brocke to answer that question because he's been involved from day one in the reclamation of those coal mines.

MR. BROCKE: Thank you, Mr. Chairman. There are two aspects to relate to with respect to the Highvale mine. One is the research aspect that is provided for under this program, and the other side is the regulatory program that TransAlta is required to operate under under our legislation. So on the research side we established a

project on the Highvale mine five, six, seven years ago where a number of soil-depth experiments were set up on various slopes with various aspects to test and get some answers on the very questions that you're asking. That program is just about wound up at Highvale and showing some very positive results and giving us directions to feed into our regulatory program, whereby TransAlta is required to salvage certain depths of topsoil and subsoil, store them, and then replace them after the mine spoils have been leveled. So I think we have that in pretty good hand.

MR. DEPUTY CHAIRMAN: Thank you.

The Member for Edmonton-Meadowlark.

MR. MITCHELL: I just have one question, Mr. Chairman, and it concerns the propriety of having the Department of the Environment responsible for irrigation headworks at all and whether that conjures up or is in fact a conflict of interest. My view would be that it would be more appropriate for the responsibility for irrigation headworks to reside with the department of public works, with the Environment department more properly being responsible for ensuring that those and other irrigation related projects are done in an environmentally responsible manner.

MR. FOWLER: That may in fact be so, but I don't believe that it would be a conflict of interest, hon. member, in this matter. It was a decision of this government at the commencement of the program that it would be administered through the Department of the Environment. Insofar as the government is aware, nothing has arisen during the life of this program to date that has given us any reason to believe that it would necessarily be better served under any other department. There are as a result of the program now, and I think it would be the same under any department, 1.4 million acres under irrigation on the irrigation side, which is by far the biggest money user in these two programs. I think the Department of the Environment has a responsibility in resource management of the natural resource water, and I perceive, while I wasn't here, that that was likely the main reason that it ended up in Environment. If Mr. MacNichol can expand on that response, I would ask him to do so.

MR. MacNICHOL: No, Mr. Chairman, I can't add much except that we're also responsible for managing the agreements we have with the other provinces with regards to the distribution of water. Our involvement is just with the main rivers and the main transmission lines, managing that water. As I said before, we've got agreements with municipalities and other provinces. So it's a quantity and a quality issue.

MR. DEPUTY CHAIRMAN: The Member for Edmonton-Calder, followed by Calgary-Fish Creek.

MS MJOLSNES: Thank you, Mr. Chairman, and good morning to the minister and his assistants. I'd like to just follow up on some of the remarks that the minister made in his opening. You talked about research and its effects and then the fact that the research is looking into the effects that these projects have on groundwater. It seems to me that if in fact water is contaminated after a project is completed, then there's not a heck of a lot you can do to correct the situation. I'm wondering if the research takes a look at prevention in any way. In other words, do they take a look at, for example, with respect to groundwater, preventing the groundwater from being contaminated in the first place?

MR. MacNICHOL: Mr. Chairman, yes. Prevention is the top priority. If you can look at how we're designing, for example,

landfills these days compared to what they used to be years ago, prevention in the groundwater is very much on our minds. And we've got literally thousands of groundwater monitoring stations all over this province.

MS MJOLSNES: Thank you.

My supplementary, Mr. Chairman, would be: is it correct, then, that you get involved in the projects before they're abandoned, that you work with industry and municipalities to correct a potential situation where there might be pollution and contamination?

9:32

MR. MacNICHOL: Yes, we do, Mr. Chairman, and we've got guidelines available now for municipalities and industry that we expect them to follow.

MS MJOLSNES: Thank you.

MR. FOWLER: If I might, Mr. Chairman, just add to that. We will be distributing the booklet called Reclamation Research Annual Report 1991 to members of the committee. I have quickly looked it over, and it is a wealth of information on what is being done in respect to reclamation research. I'm sure the hon. member will find the answer to many of her unasked questions at this point on this important matter.

MR. DEPUTY CHAIRMAN: Thank you.

The Member for Calgary-Fish Creek, followed by the Member for Lacombe.

MR. PAYNE: Mr. Chairman, apologies to you and the other members of the committee and our guests for my tardy arrival today, but the highway south of Red Deer this morning was somewhat problematical. Because I was a few minutes late, it's possible that the acting minister in his opening remarks addressed my question. If that is the case, Mr. Chairman, I appreciate you so indicating.

My question has to do with the Carseland-Bow headworks system southeast of Calgary. According to the coloured map that was distributed earlier during this session, it's indicated that the Carseland-Bow headworks system is under construction. Inasmuch as this is a potentially relevant project as far as Calgarians and those south and east of the city are concerned, I'm wondering if the acting minister or possibly the deputy could apprise the committee of the status or the progress on that particular headworks system.

MR. FOWLER: To the hon. member, in respect to the headworks of Carseland-Bow this project was not in the initial budgeting at the beginning of the program and is still not in that program. So the major rehabilitation work that is in fact necessary, as you recognize, cannot be done or undertaken until a new program has in fact been proposed and accepted. In the program of 1980, as I say, the funding was not allocated. However, there was some work done in the present program which allowed for the replacement of some of the badly deteriorated infrastructure, most particularly the West Arrowwood syphon. The replacement of all bridges and some of the minor canal improvement work was done also. In 1988 the province reached an agreement between the Blackfoot band on land right-of-way settlements in that area as well.

MR. PAYNE: Mr. Chairman, I of course do recognize that this project wasn't provided for in the original 1988 plan, but obviously there have been some dollars expended to date on the aspects of the project that the acting minister has just referred to. I wonder: could the committee be provided with a ballpark estimate of those

expenditures to date and, if it's in order, Mr. Chairman, what kinds of dollars it would take to complete the project?

MR. MELNYCHUK: Mr. Chairman, the expenditures to date on the Carseland-Bow headworks, as of September 30, 1992, were \$19.6 million. As the minister indicated, this was primarily for the West Arrowwood syphon, the replacement of bridges, and some problems with the canal slumping. The cost to fully rehabilitate that system, which is not within the program now, ranges in the vicinity of about \$30 million.

MR. PAYNE: Would it be fair to say then, Mr. Chairman, that this project is roughly 40 percent completed, if you've gone through \$20 million and you need another \$30 million?

MR. MELNYCHUK: That's about correct.

MR. PAYNE: Mr. Chairman, I just want to get a better handle on it. Does it require persuasion by this committee and the Minister of the Environment, of cabinet and priorities, to prioritize the completion of this project? I guess I'm trying to get a better handle on the process to complete the funding so that this very worthwhile project can in fact be completed over a period of time.

MR. FOWLER: Apparently, I'm informed, about \$30 million more is needed, which amount of money was not included in the initial allocation from the heritage savings trust fund. Of course, the department would like to complete it. If the committee feels so inclined to encourage or recommend it, if that's the case, that would only add to the case of the department in coming back to Treasury and government for that purpose.

MR. PAYNE: Thank you, Mr. Chairman.

MR. DEPUTY CHAIRMAN: Thank you.

The Member for Lacombe, followed by the Member for Lloydminster.

MR. MOORE: Thanks, Mr. Chairman. On reclamation projects we restore these garbage dumps, put a layer of clay and so on and black dirt, but there's not much we can do with that area for a number of years because of methane gas and things like that. Are we doing anything to bring these areas into more of a productive stage after we reclaim them? Or are we just going to wait for 25 or 30 years to see if there's any buildup of gas from the garbage down below?

MR. MacNICHOL: Mr. Chairman, no. First of all, we try to be innovative in what we can do with them, and we've had some success with fish ponds, small parks, plus bringing them back to their original state, trees. Even golf courses have been placed on old garbage dumps right here in the city of Edmonton. Now, with regards to any safety problems, methane gas for example, we do monitor that to make sure that we don't put anybody in a dangerous situation. But most of them are reclaimed and used by the public.

MR. MOORE: Mr. Chairman, we just got a book here, Reclamation Research. I just got it a few minutes ago, and I haven't had time to really go through it. But talking on research with methane gas, we hear that down in the States some of them have a process where they can sell that gas: accumulate it, store it, pipe it out, and use it. Are we doing anything like that in Alberta?

MR. MacNICHOL: Yes, we are, Mr. Chairman. In looking for a new regional landfill, with one of the sites that the city of Edmonton

picked, that's one of the components of it: to use the methane from some of their old landfill sites. So the answer is yes. They have already had some success in extracting methane from some of the old garbage sites.

MR. DEPUTY CHAIRMAN: The Member for Lloydminster.

MR. CHERRY: Thank you, Mr. Chairman. Good morning, gentlemen. I guess my question is possibly pointed more to one area, and it's in the reclamation of gravel pits. In 1965, for example, if the government of the day took gravel out of the pit and now with this government they're wanting reclamation on that pit, I guess my concern would be: who's going to pay the price for that? Is it the government or is it the landowner?

MR. BROCKE: Old, derelict gravel pits are covered under this program if they've been municipally owned or are on Crown land. Private ownership -- and prior to 1978 we had no regulations to deal with sand and gravel. So they would be under a derelict condition, and they would still be the responsibility of the landowner.

9:42

MR. CHERRY: Well, my supplementary is basically that the owner himself was getting a nickel a yard for that gravel and now you come along and say that he must reclaim that. I find it very difficult to think that you would think it was the responsibility of the landowner. I look at the costs today associated with it.

[Mr. Ady in the Chair]

MR. MacNICHOL: Mr. Chairman, I'll try to answer that for Mr. Brocke. The fact of the matter is that there aren't that many left in terms of the reclamation of these old gravel pits, but we expect, generally speaking, the owner to be responsible for reclaiming it. But if it's special circumstances or it happened a long, long, long time ago, we are flexible, I guess.

MR. CHERRY: Okay. Thanks, Mr. Chairman.

MR. CHAIRMAN: Westlock-Sturgeon.

MR. TAYLOR: Thank you, Mr. Chairman. Back again to a water management program. I gather it's been expanded to cover a lot more than just putting in ditches. In other words, if you're managing water, has the department or is the department looking at the water rights being transferred to the users or the farmers? Or is the policy to keep it in the government domain?

MR. MacNICHOL: Mr. Chairman, Mr. Melnychuk may want to expand, but the fact of the matter is that that's under review right now. The Water Resources Act itself is under review right now, and there are public discussions going on. I don't think I can add much more except that it's under review.

MR. TAYLOR: That leads to the second one. As you know, irrigation is the biggest user of our water. About 85 percent of our water, I gather, goes into irrigation use in the south there. What are we doing to protect that so we continue to get 85 percent of the water for agriculture and not let industrial or domestic consumption expand to squeeze it out, as it has done in, say, California?

MR. FOWLER: This can be added to by the officials here, hon. member, but human consumption remains the primary objective. There are five areas of order of use. Human consumption is

certainly the first. Municipal use is the second, and food production or farming is in fact the third. Then it goes on to recreation and, finally, industrial use. It is felt that that is a proper priority for water use in the area, and of course there's a tight regulation on how much water can be taken out of the rivers. That has to do with agreements with other governments downstream, be it the Saskatchewan or the Manitoba government. As long as those priorities remain in use, I don't know how we stop people from moving into the towns and villages and it growing there or what percentage is used on that. Maybe Mr. Melnychuk can give some idea of the percentages of use in those five priority areas.

MR. MELNYCHUK: Mr. Chairman, in addition to what the minister has indicated, in the relative percentages of consumptive use of water with respect to irrigation, municipal, and domestic use, the consumptive use for municipal is very low compared to irrigation. In terms of protecting those rights, as the minister indicated there is a preference of use in the legislation which puts irrigation and food production at the top, above industry. Also, the water rights that the irrigation districts have will be protected so that there is no process by which they could lose those water rights.

MR. TAYLOR: Possibly, Mr. Chairman, they could elaborate on that, because my understanding is that, as the minister says, domestic and human consumption takes a priority. So if your population grows -- this is what we have found in the western United States, and I think we'll expect growth here too -- there's only one place water comes from, and it comes from what's allotted to irrigation. I wish you could expand. I don't see anything in our legislation that protects our irrigation districts as to the same volume of water year after year. I can see them being protected as to a percentage of what's left after human consumption but not on the overall. They're second to human consumption. Am I wrong?

MR. MELNYCHUK: Well, my point there, Mr. Chairman, was that the licences that the districts have specify the volume of water they can withdraw per year. That was the point I was making, that that volume number in acre-feet is protected and would not be taken away in any fashion. New allocations, of course, are a different situation.

MR. TAYLOR: May I ask, Mr. Chairman, a supplemental then?

MR. CHAIRMAN: Just a minute, hon. member. I believe you've had your three supplementals.

MR. TAYLOR: Well, if you want to, then we'll go around again.

MR. CHAIRMAN: Okay.
The Member for Stony Plain.

MR. WOLOSHYN: The mines will stay on my mind because I'm not totally happy with what's happening there, including what happens to the groundwater. Now, we've had all sorts of studies, yet I haven't seen any direction given to the mining companies with respect to how they will replace what becomes of the overburden, which starts off as a variety of overburdens and then becomes spoil. That spoil can be 50, 60, 70 feet deep. What kinds of directives are coming out of this research that go beyond just the top foot or so that's going to be agriculturally claimed? What happens on top will be contingent on what happens down below. So what kinds of directives have been given to strip miners that have resulted directly from the research? The research has been going on, I would suspect, probably about 15 years now.

MR. BROCKE: Mr. Chairman, if we want to focus on the Highvale mine itself and use that as the example, as I'd indicated earlier, we've had a research project ongoing there to determine suitable depth requirements for subsoil replacement. Out of that, then, that has moved into our regulatory program, where we issue the development and reclamation approval they operate under. Within that approval we specify the depths of both topsoil and subsoil that they have to return to achieve our reclamation objective, which is equivalent land capability.

MR. MacNICHOL: I think to supplement that, Mr. Chairman, where we have the hammer is in the original licence and the guidelines that we give to the industry as a result of the research. So it's the original licence and the understanding they have with the government with regards to development of that mine.

MR. WOLOSHYN: Getting back to Highvale, which is rather an interesting mine, they're into some areas where they use blasting. Now, I don't know if you're aware of that or not. So I would suspect, then, that in the permit issued by the ERCB, that material, which would be the heavy sandstone, would be set aside so that when we have the backfill coming in, it would be somewhere relative to where it was taken out. I think research has shown that the capability of the groundwater coming back in this area is directly related to the kind of spoil put back. Are you telling me that TransAlta, in this case Fording Coal, is bound to some degree to replace that sandstone that's being blasted out and at relatively the same level that they removed it from?

9:52

MR. BROCKE: Mr. Chairman, that may or may not work out that way in the turnover of spoil with the very large equipment that they're using, particularly the 90-cubic yard draglines that are in use at Highvale. In effect, the overburden that is in place generally winds up pretty close to being at the level where it was before. The thing that happens to it, of course, is that it's not in the same structure or form anymore; it's been broken up very severely. So groundwater does re-establish itself. It will re-establish in the spoil. We have proven that through our research very conclusively. The quality varies from mine to mine depending on the source of the water and the quality of the overburden material.

MR. WOLOSHYN: Okay. Now, sticking with the mine, when they've finished a section and they haven't got back to the final reclamation, and also when they are doing the initial stripping for the land clearing prior to the mining itself, there's generally a high degree of erosion. At one time they buried the trees, and that was stopped; then they burned them, and that was a problem. Has there been any direction in the research to look at economic ways of chipping, then using those chips as, if you will, the material that would keep the soil from eroding, and then after that doing the topsoil? Is there any direction given from this project to that kind of an approach?

MR. BROCKE: Mr. Chairman, the answer is no. If I can add a little bit just from the knowledge that we have, some of the mining companies themselves, in particular across the river from Highvale at Genesee, have contracted some of the forest product companies in the Drayton Valley area to come and clear the trees for them and take them to their chipping plants and oriented strandboard plants. They're doing that on their own initiative.

MR. CHAIRMAN: Thank you.
The Member for Westlock-Sturgeon.

MR. TAYLOR: Thank you, Mr. Chairman. I want to go back to the question again when you were talking about the protection of the irrigation districts as to the acre-feet they can withdraw. How far into the future is that protection afforded them? How many years are they guaranteed into the future?

MR. MELNYCHUK: Mr. Chairman, the only way that a water right could be withdrawn without compensation would be as a result of abuse or overuse, so those water rights are there in perpetuity. That's the basis of the present legislation.

MR. TAYLOR: Human consumption expands to where there isn't enough water. Where does the irrigation district lie in this? This is what I'm trying to get at. See, contrary to what the minister says, there are all kinds of places in the world, from Iran to California, that limit human consumption. I know it's maybe not popular here, but they limit it. So that's what I'm trying to get at. What happens when human consumption expands to the point where they have to cut back? Is that all that happens, that we cut back on a pro rata basis to the irrigation districts?

MR. MacNICHOL: Well, Mr. Chairman, I'll answer that. First of all, that question has come up in the public reviews that we're doing of our Act. It's very much on everybody's mind. That question is asked many, many times, and it's still out there in public debate. However, there are two things that have happened that give us quite a bit of time to assess the problem. The first one is that we have not a surplus of water but do have an adequate supply of water for the next few years. That's right now and for the next four or five years or more. So that's one thing.

The second thing is that our new systems and the way we allocate water to these farmers is a lot more efficient than what it used to be. There's no leakage as we used to have before. So we're making better use of our water than we did in the past, and there is still room for more water use.

MR. TAYLOR: That leads into the other area. You're talking about efficient use of water and that. I did some research a few months ago, and I found that Alberta, I think, is the only area in North America that does not meter water in irrigation users. There might be one other. All the other areas measure the water that goes out. You measure the water to the district but not to the individual users. Are there any plans there at all or any drive to look at that?

MR. MacNICHOL: Mr. Chairman, that's another question. Our approach to date has been this. The original allocation of water, as you know, is very careful. A farmer or a group of farmers ask for so much water. So that water is very carefully allocated.

With regards to metering and conservation, it's being studied too. We have made a lot of savings from the leakage side, but the farmer still has to pay a considerable amount of money for his water. You know, it's not cheap, and it's not cheap either to put it on the land. The irrigation system is expensive. So the original allocation, the cost of water itself to the district, plus the costs of distributing it are pretty good incentives.

MR. TAYLOR: Water rationing.

MR. MacNICHOL: Right.

MR. TAYLOR: I want it to be even more clear for the public record, because as I go out debating agriculture, I get a lot of these questions.

The other thing is that if farmers have the water, as you say, and the right, do they have to use it for irrigation? If their municipality had given them permission for an industry or a housing development, could they use the water for that?

MR. MacNICHOL: The permits, Mr. Chairman, are pretty specific in what they're to be used for. As you know, if the farmer doesn't get all the water, he can't irrigate all the land that he has. So it's pretty restrictive, what he can use that water for.

MR. CHAIRMAN: Thank you.
The Member for Stony Plain.

MR. WOLOSHYN: Thank you. Well, I'll get away from the mines. The biggest crybaby in this province looking for government handouts is the oil industry. The oil industry, as we know, is on its way out. How much research is being done to determine the cost of reclaiming the sites scattered throughout the province, the old oil wells in concrete with casings and the small and large pipelines that are interconnecting them? Contrary to what my mouthy friend from Westlock-Sturgeon has to say, regular oil production is on a decline and we're heading into the heavy. Consequently, what I'm more concerned about is: are we getting a head start to see that we don't end up with a whole bunch of mini orphan sites to look after in the future?

MR. CHAIRMAN: Well, hon. member, I don't think the question is appropriate. It's not part of what's before the committee today. It really needs to be put at another time in question period or in estimates or in Committee of Supply. It doesn't have anything to do with funding from the heritage savings trust fund.

MR. WOLOSHYN: Well, Mr. Chairman, I won't if you'd like . . .

MR. CHAIRMAN: If you'd like to pose the question in another way to make it applicable.

MR. WOLOSHYN: Well, we'll leave that one behind. I believe you're wrong, but that's quite fair moderating.

MR. CHAIRMAN: Well, the Chair is prepared to listen to the reason that you think it's in error.

MR. WOLOSHYN: In this particular land reclamation we're looking at orphan sites which were left behind by private industry. We're looking at municipal dumps and gravel pits and whatnot. My question was: is there any action being taken now to anticipate the possibility, if you will, of a large number of orphan sites being dumped onto the government as a result of oil wells going out of production? A lot of these wells, quite frankly most of them, are currently on Crown land, and we will inherit them. I'm just wondering if there's some direction taken by this department under this current mandate from the HTF to look at it.

MR. MacNICHOL: Yes, Mr. Chairman.

MR. CHAIRMAN: Thank you.
Do you have another question?

MR. WOLOSHYN: Yes, I do. The other area that I've just glanced at in here which gives me a large degree of concern: I notice there's reference to sterilants being left along rights-of-way and whatnot. Now, it is easy to say that we can sit back and wait for this land to reclaim itself naturally, but in the meantime the chemicals are being washed into sources of surface water, groundwater, whatever have

you. I think that can be shown if testing were done. As a result of your research and identification of this overuse of chemicals, have there been any directives given for the companies responsible to come back and do a bit of a cleanup or some form of reclamation now?

10:02

MR. BROCKE: Mr. Chairman, yes, we've done fairly extensive research in the area of sterilant reclamation or remediation. Out of our programs to this point we have identified a number of amendments that can be successfully used to remedy areas affected by sterilants and basically are very simple. Activated charcoal works very well, as does common farm manure; it works very well in deactivating sterilants. The latter, at least, is readily available out there in the oil fields.

We're continuing other research to look for other amendments that may be more cost-effective or more readily available. That is one of the very important aspects of our research program.

MR. WOLOSHYN: Now, in view of the long-term effects of using sterilants, as a result of your research again, have you made recommendations to the licensing groups to either totally curtail or else to a large degree monitor the amount of junk going on there? Because on a right-of-way to my knowledge there isn't the monitoring. You're really expecting the knowledge and the co-operation of the employees of whatever companies to do it. Is there consideration being given to saying, "Let's get away from these sterilants"?

MR. BROCKE: The answer to that is a very definite yes. There are very, very few companies in vegetation management anymore that in fact use sterilants. They use the various kinds of herbicides that are biodegradable and last only for the season. So that's there, yes.

MR. CHAIRMAN: Thank you.

The Member for Westlock-Sturgeon.

MR. TAYLOR: Thank you, Mr. Chairman. It's the question of water management policy, and it touches a little bit about what Edmonton-Calder and Stony Plain have been talking about. They mention subsurface water. I gather that subsurface water and its pollution as a subsurface is part of the water management program now. Am I correct?

MR. CHAIRMAN: Is that the question, hon. member?

MR. TAYLOR: Yes. What I'm trying to find out is: what are the parameters? See, the water management program things have been changed; they're now called the water management improvement program. Is it just the surface, or do you go into the potable aquifers?

MR. MELNYCHUK: As far as the projects that are funded by this program that we're discussing here this morning, there are no groundwater sources that are being used for irrigation or municipal.

If I may proceed, Mr. Chairman. Under our general revenue fund program, however, we do have a groundwater monitoring network throughout the province of 140 observation wells which measure the fluctuation in those aquifers as well as the water quality in them.

MR. TAYLOR: I see. That's what I wanted to get. When I wasn't making my living as an MLA, that's what I did: water works in the Middle East. Of course, as you know, the hydrostatic head of your reservoir controls whether pollution can come into the aquifer, and

they were mentioning pollution and orphan wells and so on. I was just wondering if 120 or 123 . . . Or 143?

MR. MELNYCHUK: A hundred and forty observation wells.

MR. TAYLOR: Yeah. That's a very slim density. Where are they concentrated? In the south or in the irrigation areas or just where?

MR. MELNYCHUK: Mr. Chairman, they are located in those areas where we have a substantial use of groundwater; for example, in northeastern Alberta where groundwater is used for oil production, in the Wainwright area, in the area west of Grande Prairie: primarily in those areas where groundwater is being used for industrial purposes and high-rate municipal purposes. So they are strategically located in order to monitor those areas where groundwater is heavily used.

MR. TAYLOR: That leads into the next question then. In the irrigation areas where there is a certain amount of seepage up and seepage down -- and I don't know whether we've got any Ogallala reservoir up here or not -- what kind of work is being done to see whether we have any subsurface aquifers that could back up surface irrigation? In other words, are we doing the survey of that water at depth through the irrigation areas?

MR. MELNYCHUK: Mr. Chairman, as part of our general revenue fund program once again, there is an inventory of our groundwater resources throughout the province, including southern Alberta. The results from that program indicate to us that high-rate withdrawals, as would be required for irrigation projects, probably could not be sustained by the aquifers that we have in southern Alberta. On the basis of that, our policy has been that groundwater use in southern Alberta particularly would be restricted to domestic, farm, and in some cases municipal use and would not be used for industry or high-rate irrigation purposes. That's based on the analysis of the inventory work that's been done there.

MR. CHAIRMAN: Thank you.

Hon. member, are there other questions?

MR. TAYLOR: I think I can finish up with just one or two questions. Is that all right?

The modern management improvement program and the fact that municipalities, I think, have most of the control yet as to handling wetlands . . .

MR. CHAIRMAN: Hon. member, you really have to hold your question to the projects funded under the Alberta heritage savings trust fund.

MR. TAYLOR: If it's not in with their budgeting, they can tell me. See, you weren't here, Mr. Chairman, at the beginning. They mentioned that they have expanded things into a water management improvement program. Those were the words. It's covering much more than just headworks. At least that was what I was told by the minister. So what I'm trying to do is find the edge.

MR. CHAIRMAN: And you've nearly found it. So please pose your question having to do with the project's funding.

MR. TAYLOR: One of the areas that is important in water salinization and so on is the local sloughs and swamps and so on and so forth. Yet by zoning laws it's up to the municipality whether they could put a road through it or whether they could get the permit to

drain them and that. What I'm wondering is: with the water management improvement program that you have announced here and that you're doing, do you feel you have sufficient authority to step in where the MDs may not be managing the surface water in an environmentally sound manner?

MR. FOWLER: I don't think that under this program, hon. member, that type of authority is given. This program is very specific into the irrigation districts and the rehabilitation of those systems. There may well be authority in other divisions of the Department of the Environment and under the normal operations of that department but not in respect of this program that's funded by the heritage savings trust fund.

MR. TAYLOR: Just one elaboration. Did you say there has been no evidence of conflict between this program and the MDs' rights?

MR. FOWLER: I am advised and am knowledgeable that there is in fact a different mechanism to handle that anyway without overlapping onto this program.

MR. CHAIRMAN: So that would be handled under the general revenue fund of the province.

Do you have any further questions, Member for Westlock-Sturgeon?

MR. TAYLOR: No. That'll do it.

MR. CHAIRMAN: Thank you.

I'd like to thank the acting minister for coming before us, realizing the difficulty in trying to fill the shoes of the minister on short notice, and his department people that have come and given us information. I would like the committee to remain for just a few minutes. If the minister and his department people would like to leave, please feel free to do that. Again, thank you for coming before the committee.

For the benefit of the committee on scheduling the deadline for recommendations for this department, would Friday noon to the chairman be acceptable to the committee?

HON. MEMBERS: Agreed.

10:12

MR. CHAIRMAN: I'd also like to discuss the time that we have scheduled for debating the recommendations. In view of the fact that we have only 31 recommendations this year and we have three days blocked out to debate them, in order to free up people's calendars, it would seem to the Chair that we could perhaps free up the last day so that people could go ahead and schedule other things. Surely, in view of our past performance, we could debate 31 recommendations on November 24 and 25 and free up November 26. If the committee's in agreement with that, that would allow members to calendar the 26th for other purposes. Is there any discussion or disagreement to that procedure? If not, please consider that day not scheduled then.

The last item for your attention is the voting, again scheduled for December 1 at 2 p.m. If there's no discussion on that, we'll leave that as scheduled: Tuesday, December 1. That's all the business that the Chair has. If there's no other coming from the committee, the Chair would accept a motion for adjournment.

The Member for Lloydminster. All in favour? The motion's carried.

[The committee adjourned at 10:13 a.m.]

