

Title: Estimates of Environment, Monday, March 20, 2000

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8:05 a.m.

[Mr. Hierath in the chair]

### Designated Supply Subcommittee – Environment

Hierath, Ron, Chairman  
Amery, Moe  
Boutilier, Guy  
Carlson, Debby

Coutts, David  
Ducharme, Denis  
Langevin, Paul  
Magnus, Richard

Pannu, Raj  
Sloan, Linda  
Strang, Ivan  
White, Lance

THE CHAIRMAN: We may as well call the meeting to order this morning and welcome the members of the designated supply subcommittee on Environment. I spoke to most of the members before the meeting this morning to explain that there is an all-party agreement to allocate the time for the meeting. If there is no other agreement, there is a suggestion that an earlier model that has worked with other designated supply subcommittees would maybe work here. In this case, the minister would be allowed up to 20 minutes for making opening remarks and comments. The Official Opposition would then have a full two hours for questions and answers. I understand that the format would allow for debate with the minister to keep it on an informal basis during those two hours. Following the two hours the leader of the ND, the Member for Edmonton-Strathcona – he'll probably show up a little bit later here – will be allowed 15 minutes for questions and answers from the minister, and if there are no other questions, then we would have a motion to adjourn. If all committee members agree to this process, then I would like to have a motion in that regard.

MR. LANGEVIN: I'll make that motion.

THE CHAIRMAN: All those in favour?

HON. MEMBERS: Agreed.

THE CHAIRMAN: Carried. Thank you.

Okay. I'll turn it over to the Minister of Environment to make some opening comments.

MR. MAR: Thank you, Mr. Chairman. Thank you, colleagues. It's my pleasure to present the budget for Alberta Environment to support our business plan for 2000 through 2003. This budget shows how we're going to allocate and build our internal resources to protect, preserve, and sustain our environmental resources.

I'm going to start by looking at the total budget and what the numbers mean. Then I want to highlight the specific areas where we're increasing spending, and then I also want to take a few moments to talk about where we did not increase spending and indicate why. Finally, in the interests of getting as much information out as possible, I'll be looking forward to taking your questions.

In many departments you can look at the current year forecast and get a context for the proposed budget because spending increases during the current fiscal year often continue into the new budget. However, that is seldom true for Environment mainly because of forest fires. Every year we start with a base amount of \$50 million to fight forest fires. This total amount is found on page 134, line 3.0.1, \$38 million, and on page 151, \$12 million under the enhancement fund listed as forest fires.

Actual spending depends on the severity of the fire season, and 1999 was the second-worst fire year on record. At the time we

prepared the budget, we expected the total cost to be around \$184 million, which is the total in front of you. Current weather conditions have reduced that estimate by about \$10 million to \$174 million. Other increases and decreases in the forecast almost balance each other out, but fire suppression costs still leave us with a \$118.5 million difference between the adjusted forecast and my proposed budget.

If we cannot easily compare the proposed budget to the forecast, how does it stack up against the last budget? This year that comparison is just as difficult to make. It looks like my budget for 2000-2001 is about \$22 million less than in 1999-2000, when in fact I actually have \$26 million more.

Now, the difference will require some explanation. Most of it, \$35 million, is a change in accounting. Alberta Environment grants capital assets like Crown land to municipalities or nonprofit organizations or businesses. For example, land may be granted for locally administered parks that enrich the quality of life in the area by offering outdoor recreation or preserving habitat. A caveat ensures that the land is used for park purposes only. The land is granted for a nominal sum, often a dollar. We record the difference between this nominal sum and the estimated fair market value as a noncash grant under the nominal sum disposals.

In our budget we estimate the value of land we expect to grant in that year. We call it a nominal sum provision. In 1999 we estimated the provision at \$45 million. However, attaching a park use caveat has an impact on land value. First of all, the market value is based on potential land use. Restricting the use to parks lowered the market value even though the intrinsic value remains unchanged. Secondly, not everyone wanted to accept land with a park use caveat attached, and therefore we were unable to grant the land. This reduced demand also affected the size of the nominal sum provision. Recognizing these two factors in Budget 2000, we reduced the nominal sum provision to \$10 million, for a \$35 million reduction from Budget 1999.

My budget also includes a reduction of \$13 million in the fire reclamation program. Last year we had \$17 million in lottery funds for replanting seedling trees destroyed by fire in the spring of 1998. In Budget 2000 we will extend the program to include seedlings destroyed in the summer and fall of 1998 at a much smaller cost of only \$4 million plus another \$4 million in Budget 2001, when the program ends.

That \$13 million net reduction in the fire reclamation program plus the \$35 million loss under the nominal sum disposals fully accounts for the difference between the \$22 million reduction we see and the very real \$26 million budget increase.

The bottom line is that for fiscal 2000-2001 the total voted department spending on operating and capital will be \$332.5 million, an increase of \$26 million targeted to specific environmental priorities. Almost half the increase, \$12.9 million, is for our important internal resource, our staff: \$8.9 million is for staffing costs and for training and staff development, \$2.6 million will hire more enforcement officers as our frontline defence against environmental harm, and \$1.4 million will help to staff the new bureau of climate change that will support Climate Change Central. Opera-

tional funding for Climate Change Central is coming out of the current fiscal year.

We're also making a strong commitment to enhanced forest protection. The department will spend \$5 million to buy and operate the VHF FireNet radio system. This will bring our fire-fighting communications up to the North American standard for greater firefighter safety, greater tactical efficiency, and more effective fire-fighting operations.

My department will spend \$3.1 million of its increase on infrastructure support, equipment operating costs, and site reclamation. I am increasing endangered species monitoring by \$2.2 million to build our knowledge and understanding so that we can act to better preserve our wildlife. I am committing \$1.6 million for emerging issues. This will help leverage support for new priorities like gas flaring research. Finally, there is \$1.2 million for changes to dedicated revenues, amortization, and valuation adjustments.

Just as important as the money we spend are the dollars we're not spending and why. My department had responsibility for the petroleum storage tank remediation program, which is aimed at cleaning up petroleum storage sites like abandoned service stations. While the program has moved from Environment to Municipal Affairs, I will assist the Minister of Municipal Affairs with monitoring, advice, and other services. We both want the same result.

This budget also shows no increase in my \$50 million base budget for fire suppression. With another dry winter our forests are suffering the accumulative impact of three low snow winters. I've already moved up the official start of the forest fire season by a month, to March 1, because we could have another very early and very hot start to the fire season. However, if we get another spring snowfall like we had on the 6th of March and if we get it in the north and north-central part of the province, where the trees are, it could drastically reduce our need for fire fighting, and so could a wet spring or summer. We will continue to address fire suppression costs throughout the year and if the need arises.

To conclude, this budget continues our essential regulatory monitoring, enforcement, and resource management work. The new dollars help to relieve cost pressures and address priorities in key areas, most notably in human resources, fire fighting, endangered species, and other priorities where additional investment will lay the groundwork for future long-term benefit. This budget sends the message that Alberta's environment in all its diversity remains a priority that this government has committed to meet. I ask your support for my 2000-2001 budget.

Mr. Chairman, for the record I'll read in and introduce the three people who are sitting with me at the table: the deputy minister, Doug Radke; assistant deputy minister, Cliff Henderson; and chief financial officer, Bruce Perry.

Thank you.

8:15

THE CHAIRMAN: Okay. Thanks, Gary.

Would you like to start, Debby?

MS CARLSON: Sure. Thanks. Thank you, Mr. Minister and all of your staff. It's nice to see you once a year. I know this isn't your favourite part of the year, but it certainly is mine.

It's been very helpful to get the answers to the questions in past years. Certainly last year we got more comprehensive answers than we've ever had before, and I really appreciate that. They didn't come until mid-February, which is better than not coming at all, but certainly the comprehensiveness of the answers was greatly appreciated and helps in the understanding of how the ministry

operates and forestalls some issues that could otherwise be brought up that really aren't necessary to be handled in that manner.

My first question, Mr. Minister, is in regard to some comments you made in terms of endangered species. I'm very happy to see that there are some additional dollars there. Can you give us some explanation in terms of what you're doing in terms of expanding corridors? As you and I both know, that's a part of ensuring that species stay viable in this province.

THE CHAIRMAN: Are you going to continue?

MS CARLSON: No. That's all I'll ask him.

THE CHAIRMAN: Well, we'll keep this kind of informal, Gary, with questions back and forth and maybe not even through the chair.

MR. MAR: With respect to endangered species, we've had a very good program in the province of Alberta. We have made some changes to our legislation that have been necessary in order to meet Alberta's commitment under the accord for species protection, which is a national accord that Alberta was one of the first signatories to. We do have a committee headed up by Ivan Strang that is providing us with recommendations on the kinds of species that are in need of protection and programs for their recovery.

With respect to corridors, we're conscious of corridors, but with respect to any specifics, I might refer to the deputy minister.

MR. RADKE: Are you referring to wildlife corridors in the Bow Valley?

MS CARLSON: Throughout the province. My particular focus would be the Bow Valley.

MR. RADKE: As you know, we have a study under way with respect to the one corridor by Three Sisters, which has another year or year and a half to go. We have been examining the Y2Y proposal to see how our existing designations fit in along the eastern slopes, and we have a series of management plans under development and monitoring under the province and so on. Does that cover your question? We could get Morley to provide you with some more detail.

MS CARLSON: I wouldn't mind a little more detail. When those management plans are in place, will they be public?

MR. RADKE: Yes.

MS CARLSON: A little more detail in terms of what is happening in the rest of the province I would appreciate, if that's possible.

MR. MAR: Well, perhaps we'll have Morley Barrett answer that then.

MR. BARRETT: Good morning. There are a number of activities going on with respect to the wildlife corridors, and it is really the continuing broad-based habitat availability for the movements. I would bring your attention to, for example, the grizzly bears. A big part of the study in the northwest foothills around the Cheviot mine is related to the cumulative effects and the impact and the movement corridors appropriate for grizzly bears. A lot of the land management, the special places nominations, the forest land use zones established are made with that as an important element. There's a reason for establishing those sites.

I would also point out – and these are activities still under

consideration – that some of the proposals under consideration as special places have as a basic element to the evaluation process they're undergoing right now the need to maintain continuity of corridor systems for the movements, particularly in the foothills, in the alpine range.

We want to have no loss or no dead ends for critical wildlife species, and I would say that part of the approach is looking at the requirements for the large carnivores in some of the sites, as I mentioned, because if we look after those, the same as in the Bow Valley and the Wind Valley, we will effectively look after many of the smaller species. The thinking is very much embodied in the decision process, much of which is still under way in some 40 different sites.

MS CARLSON: Just one more question while you're still here. Are you doing anything specific to address the increased pressure on caribou throughout the province?

MR. BARRETT: Yes, we are. In fact, through some of the new enrichment funding that the hon. Mr. Mar talked about earlier for endangered species, we'll support increased work with caribou in both the northwest and the northeast boreal. We're working closer with industry. We're bringing in industry, forestry, all the companies active in the area and having them at the table as we look at the special needs of caribou.

We look at both the seasonal and obviously the key wintering habitats, making sure we have access to them, and we're making joint decisions to minimize the cumulative impact as well as doing some studies to look for future ways to minimize the cumulative impacts of competing industries, if you will, on the same landscape with caribou. Industry is clearly at the table with us as a part of it, and we'll be doing some new specialized surveys and focusing staff on this with this new supportive funding. So that's very much a challenge but very much one in which we're actively engaged and will even be increasing our efforts.

MS CARLSON: Great. Mr. Minister, as those studies are available, could you send a copy to us?

MR. MAR: Yes.

MS CARLSON: That would be great.

Okay. My next questions are on climate change. Last year \$6 million was spent. Could you give us some review of what happened in that regard, a little more detail in terms of what you're doing on climate change?

MR. MAR: The \$6 million that has been set aside for climate change is based on the operational costs for climate change for each of the next three years. The \$6 million was put in the budget in 1999-2000 but will be spent in the upcoming three years.

The first step for Climate Change Central will be for constating documents to create the legal entity of Climate Change Central. The second step will be to have a funding agreement between the department and the entity of Climate Change Central, where that \$6 million can be moved into, and it is through the business plan of Climate Change Central that that \$6 million will be allocated in the various operational aspects of the entity.

MS CARLSON: So the agreement between Climate Change Central and your department: does that extend to other departments that have been doing work in this area as well, as far as you know?

MR. MAR: No.

MS CARLSON: Will they be independently negotiating, or are all the dollars coming out of your budget?

MR. MAR: The \$6 million is coming entirely out of our budget. However, that is just for the operations of Climate Change Central. Any dollars that may be levered up for projects, as an example, under the administration of Climate Change Central may come from other departments. Of course, we expect a great deal of leverage coming from the private sector and the not-for-profit organizations.

8:25

MS CARLSON: Okay. Thanks. I would have to say that what I know about the department's knowledge in climate change is that they've done an excellent job in that regard, and I think they're to be highly commended for the work they've done in that area. Certainly I look forward to seeing some of the outcomes in this next year.

What specific plans do you have dealing with both the federal government on this issue and also starting to negotiate some basis for trade credits so that industry has a road map in terms of where they need to be going?

MR. MAR: First of all, I thank you for your comments about the work that's been done in climate change to this point.

With respect to the federal government, I think there's a recognition also by the federal government that Alberta has been a leader among provinces in this regard. It's not only been the province as a government; the province as an industry has also been a leader in this particular area. It's of critical interest to the province that we maintain a leadership role in this with the federal government and with our counterparts across Canada because the stakes are so high for Albertans.

I think it'll be important for Canada to have a national strategy going into the next round of discussions at the Conference of the Parties at The Hague. There should not only be provincial strategy, but there should also be a national strategy. Many other provinces are engaged in this, although not nearly to the same extent as Alberta. We will continue to work with our federal government counterparts to ensure that the commitments that we make under climate change are realistic ones for Canada and realistic ones for Alberta.

There has been some recognition over the last few weeks that perhaps our commitments under Kyoto are not workable. In my discussions with federal Minister Goodale he indicated that the minus 6 percent reduction of greenhouse gases from 1990 levels was predicated on one of the things that you mentioned, and that is credit trading. The other one was a recognition for Canada's forest sinks, be they agricultural or forest sinks. I think Alberta's role must be, clearly, to move the yardsticks on both those issues. It is my opinion that the minus 6 percent is not achievable without a recognition of those two things.

Perhaps I'll have John Donner come to the table as well and give some of his insights into this particular matter, particularly as it relates to your question on credit trading.

MS CARLSON: Sure. I'd appreciate that.

MR. DONNER: Thank you, Mr. Minister. Good morning. The subject of credit trading within Canada has been a large part of the national process for the last year. It is difficult because it does require some framework of certainty around what the future context is of obligations for companies, what the baseline is of emissions

from which they would achieve reductions and for which they would get credit. There's a considerable interest among the provinces to move ahead on credit trading within the country to make sure there's a parallel incentive to engage in investments for reductions in Canada as well as outside Canada. That's an active issue that would likely be on the agenda for the next series of ministers' meetings to try to figure out a national approach to credit trading.

MS CARLSON: As industry is looking at this issue, Mr. Minister, what would be your advice to them in terms of ensuring that dealing with climate change issues becomes a growth issue for them and not a handicap?

MR. MAR: Actually, I think Mr. Donner would be well equipped to answer that for you.

MS CARLSON: Great.

MR. DONNER: We found a number of industries that are very much on the leading edge of dealing with climate change and, as the minister said, many of them within Alberta. Those are companies that are seeking out new technologies which have markedly reduced emissions or in some cases even zero emissions associated with new technologies for achieving the same energy yield. They see themselves as positioned to make those investments within Canada over time but also to take those and export the technology and to do a business of reducing emissions throughout the world on a commercial basis. So technology opportunities positioning themselves to be competitive in a new emissions-constrained environment is one of the areas.

The other is exploring offsets and developing, as the minister said, forest sinks but also agricultural sinks, which are not yet recognized internationally. In Canada we've been at the forefront of developing the science to prove up the ability to restore carbon to soils and therefore take it out of the atmosphere. Many of these companies are exploring those kinds of activities. Many are also finding associated activities in terms of landfill gas, for example, or new synergies where they're working with the municipalities or other sectors for investment opportunities that complement their core business activities.

MS CARLSON: Does Alberta have a position on what a framework for a credit would consist of?

MR. DONNER: We've been working to put forward that framework with the other governments. We haven't put forward a position saying, "Here is an Alberta position," because we're trying to work in collaboration with other governments and with industry to make sure that we come up with a framework.

The first step, a fairly modest step, was taken with the announcement of baseline protection, which ensured that if a company achieves reductions on site and thereafter it becomes critical in terms of an allocation what their emissions are, they would have that reduction restored for their baseline. It addressed only one possible future. There's been ongoing work, and we've been well served with people on the management team trying to develop a common, national approach to the credit framework.

MS CARLSON: Have you got anything that you can share at this time in terms of the progress on that specifically?

MR. DONNER: After March, after the end of this month we would likely have something that we could share on that.

MS CARLSON: That'd be excellent, if you wouldn't mind doing that at that time.

What are you looking at as a date for the baseline for companies that have achieved reductions?

MR. DONNER: Most of the baseline material goes back to 1990, but one of the issues in terms of moving forward with credit is that one is looking at what is the cost-benefit return. So there has been some discussion about piloting on a go-forward basis as opposed to going back to 1990, but for most purposes we've been baselining 1990 because that is the standard for international. So everything tends to be reflective back to 1990.

MS CARLSON: Okay, good. Thank you. That's the end of my questions on climate change.

I would like to address just human resources in general for a moment. There's been a significant increase, 84 percent. We're happy to see that there are some more staff coming inside and, particularly, some staff on the ground. Could you give us an explanation in terms of why such a significant increase?

Also, if you could talk a bit about the morale in the department. I know that this past year more than any other year I've had a number of phone calls about people who were really concerned about their ability to do frontline work in the regions because of the staff reductions and just their basic inability to handle the volume of work out there. If you could address that, I would appreciate it.

MR. MAR: One of the areas that I view as being very important in the operations of the Department of Environment is with respect to the area of enforcement, and enforcement cannot be done without manpower. I think it would be fair to say on the issue of morale that with the changes that were made in bringing park rangers and wildlife officers into being conservation officers, it could be expected that there would be some effect on the morale of staff people. However, I believe that the conservation officers now are extremely proud of the work that they are able to do.

8:35

The issue of training is a significant one, and that's the reason why money was put towards training, so these people are well equipped to do their jobs. There's no doubt, though, that when you change your job description, if you've been doing something in a certain way historically and it's being changed without appropriate training, that can have an impact on morale. I believe we've addressed that: firstly, by putting in a more appropriate number of resources in terms of our field staff that are out there, whether it be in enforcement or in other areas and, secondly, by dealing with the area of training to ensure that these people are equipped with the right skills in order to do their jobs.

I'll have the deputy minister detail more if he wishes.

MR. RADKE: In terms of the actual additions in manpower, we're showing a 47.7 increase in FTEs. Eleven of those are from the transfer into the department from Alberta Resource Development of the climate change function. Twenty-one of those positions are going to new conservation officers across the province, allocated according to where the need is for more resources on the ground. The remainder of the increases are scattered throughout the regions.

In terms of the department's morale, I think the minister said it well when he talked about the change with respect to amalgamation of parks officers and fish and wildlife officers. There's been a great deal of change of that nature in the department over the last five or six years, and a department that's constantly under change – I prefer

to call it continuous improvement – takes awhile to adjust and move forward.

During the staff survey that was taken last year, it was apparent that there was a need for concerted action on the part of management in respect of adding additional resources to help out with the hard work in terms of developing a better communication plan for internal use in the department so that staff felt involved and informed on what was going on and a heavy emphasis on training and development. We've added in this year's budget 1 and a half million dollars dedicated to training and development, 1 million of which is to be allocated for technical training and half a million of which is to be allocated to what we call corporate competencies. That would be things like communication, business planning, management development: those kinds of things which have an impact on how the field staff and management relate to each other.

We have just completed the second annual staff survey, and while the results are still very preliminary, it appears as if we have achieved in those four areas that we use to measure morale a fairly significant improvement in morale. Four questions that we asked last year and again this year – overall satisfaction with the department, I'm being kept informed of changes in the department, being kept informed about people issues, and I can talk openly and honestly – were all showing in the preliminary analysis significant improvement this year, and we're quite proud of that. The executive has made quite a concerted effort to work on morale, and all of us are under self-imposed instructions to get out to the field more and talk to staff, find out exactly what's happening, and see how we can address some of these moral issues. We think it's working.

MS CARLSON: That's good. I'm happy to see that progress being made there. One of the concerns that continually resurfaced to me was that supervisors and management didn't have the direct experience in terms of who they were supervising in the field, so I'm hoping that gets addressed at some point in the review.

My major concern in terms of staffing at this point is that with the drastic staff reductions we saw over the past few years, a great deal of the knowledge and history of what has happened in the province has been lost. How are you addressing that?

MR. MAR: Well, I would say that it is a fair statement that we have lost experienced people, but I don't think it would be fair to suggest that there is an overall loss of corporate knowledge within the department, because we have some exceptionally experienced and outstanding staff that remain with the department. It is true that we've lost good staff, but it is equally true that we retain people who are very dedicated to their jobs. I have to say that I'm very proud to be associated with such a department.

The people who work with the Department of Environment are an extremely dedicated group of people. They are knowledgeable. They do the work they do because they believe that there is intrinsic value in it, that there's something important about what they're doing. I don't think that should be discounted. While I regret the loss of experienced people who have gone on to other careers, I believe that we have the right staff that we want for the Department of Environment and that they're a dedicated staff. Whatever may be missing in terms of training is exactly the type of opportunities we're looking for in order to devote our resources with respect to training our existing staff.

MS CARLSON: Well, I'd certainly agree that the staff within the department are devoted and committed to their work and to the province, and that's certainly nice to see when I'm out in the province and having the opportunity to meet with these people.

My last question on this topic would be with regard to contracting out. How much contracting out are you doing? Could you give me some background on that first?

MR. RADKE: I'll let Bruce fill in the details, but we contract out quite a bit of our information technology, for example. We have three major contracts, one with IBM, one with . . . Help me here, guys.

MR. PERRY: ISM and LGS.

MR. RADKE: ISM, LGS, and the other one is Stewart & Stewart. Those are fairly significant contracts for the major part of our systems. For example, the system that sells fishing licences is contracted out to ISM. We have quite a number of delegated administrative organizations, and we have two agencies.

Do you want to provide some more detail, Bruce?

MR. PERRY: Yes. As the deputy mentioned, information technology is outsourced because of the requirement for the technical expertise. The other major area that wasn't mentioned is in the area of the fire suppression activities, whether it's water bombers or aircraft delivery systems where there's a person bringing in the gas to fill the planes with the fuel. Some of the resources are contracted out. Primarily it's in the areas of the emergency preparedness that we see the largest contracting dollars in the year, and as mentioned, that is variable depending upon whether you have a busy fire season or whether there's a flood or other natural disaster. Other than that, I think it's those two primary areas that are contracted out.

I think the other item would be that throughout the summer you do use wage staff in various capacities, so I don't know if you'd consider that to be contracted. It is seasonal work, whether it's in the park for a park ranger or for staff in Edmonton.

MS CARLSON: What about anything in specific projects, research and development kinds of issues?

MR. PERRY: Traditionally in the contracted-out nature if it's research, whether it's through the university or through a national affiliate that has that expertise or whether it's through, again, work on particular fire activities, those are usually not ongoing contracts; those are specific to the task at hand. I think what usually happens is that you assess whether we have the expertise, whether we have resources and who has that best expertise and best practices, and you go to the marketplace when you need that. Those are not normally ongoing; those are specific to projects. I think the goal of the ministry would be to retain. This is all part of the training initiative to have people who are familiar with that, because the part of the work that they like is the excitement part of the job. So it's very specific to tasks, and that could be either through a grant to the university or through a contract with an organization.

MS CARLSON: Okay. Thank you, Mr. Chairman. I'll yield the floor to my colleague at this time.

THE CHAIRMAN: Okay. Lance.

8:45

MR. WHITE: And that would be me. The questions will primarily, at least, start out with forest management and the like, recognizing that my caucus assignments are energy and forest management.

The first questions relate, not on this minister's watch but on the former minister's watch, to a series of occurrences that I would like

some assurance will not be ongoing through the redesign of the ministry's culture, I suspect. In the late spring of '98 you'll recall that there was a known need for early fire suppression. I don't know about the department, but I certainly know about north-central Alberta. It was a drier winter and drier spring than we had for eons.

In early May, in the House, on record I asked some pointed questions, not to embarrass, to seek information, as to preparedness. You'll recall at the time that the budget was around \$50 million, and to my knowledge and the knowledge of those that were on the ground at the time out in the area, particularly around the north and south of Slave Lake and Swan Hills, there was virtually no activity in preparedness at the time. This is proven by a KPMG report of this year. I was given the impression that my questions were less than reasonable, almost embarrassing. The information that came back was a virtual denial of any lack of preparedness. I asked the questions again in the spring session of '99 and received a similar sort of response.

Now, at this point I guess I would like the minister's assurance that that kind of occurrence would not be the design or the culture of the organization of this minister.

MR. MAR: Having regard for the fact that we're dealing with the department estimates for 2000-2001, I will say that 1998 was the worst fire year on record, followed by 1999, which was the second worst. Many of the recommendations that were made by both the Auditor General as well as in the KPMG report following the 1998 year have been implemented. You may recall that in my opening comments this morning I indicated that we were updating our capital with respect to the VHF FireNet system, that we were starting the fire season one month earlier than usual, that we are prepared for a potentially dry year. Of course that can all change with a good rainfall or a good amount of winter precipitation, so lessons have been learned from our experience in 1998.

Cliff Henderson would like to supplement on that.

MR. HENDERSON: Not other than the fact that we have, as the minister has indicated, advanced the fire season, and we have resources at hand and ready should fire season become dangerous this spring. As a matter of fact, we had a 2,000-hectare fire last week in northern Alberta, and we had resources on it and were able to contain it.

MR. WHITE: In a related area, it was through the middle '90s a concern of the staff, the lack of ongoing and continuing of training in the area. This member could understand at least in part why, because the history from the early to middle '80s was that fire suppression was a lesser priority. I don't have at hand anything other than the business plan, and it doesn't really outline what changes will occur in the training area of the entire fire suppression area.

MR. MAR: Well, again having regard for our review today of the 2000-2001 budget, I will say that if you look historically at the number of hectares burned versus the number of dollars spent on forest fire suppression in the last three years, you'll see that we've been very effective and very efficient. As an example – now you're testing my memory because these numbers aren't in front of me at this moment – if memory serves me correctly, in 1998 roughly three-quarters of a million hectares of land were burned. In 1999, a year with very similar conditions with respect to dryness, only about 130,000 hectares were burned. Is that roughly correct, Cliff? Therefore, even though we faced two fire years that were relatively similar with respect to dryness conditions, we were much more

effective in the 1999 year, having learned some things about the importance of immediate action, early suppression of fires. It's costly to do, but it has proven itself to be a much more effective way of dealing with forest fires.

Perhaps the last thing I'll mention is with respect to the 1999 fire year, that over three-quarters of the fires were contained to being less than five hectares in size if I recall correctly. I might have to rely on Cliff again to provide me with the correct figures, but the point being that the overwhelming majority of fires were contained to being very, very small fires because of quick action that was taken. That can only be the consequence of learning from past practice and from training.

MR. WHITE: The question is really related to this budget year and the expected changes. It's not noted in the allocation for training of staff.

Now, I heard Mr. Perry earlier say that a number of the staff are contracted, so that would not be the department's responsibility, but there was a time when field staff training in these areas was required, and it was virtually eliminated at one point. I'd like to know whether it's back on now, or what's the status?

MR. HENDERSON: Yes. We have a very aggressive training program at Hinton with the Environmental Training Centre, and we're continuing to do significant amounts of training for our forest officers and for our firefighters. We also have the school at Hinton co-ordinating training standards that provide standards for training to the outlying colleges such as Grande Prairie or Grouard, where we have other field training carried out. Our contract wildland and firefighter crews do most of their training through the college at Grande Prairie, and these standards are set by our school at Hinton, so there is a significant amount of training that is occurring this year. The last couple of years, of course, with the very high fire frequencies that we've had, we had to put our staff on fighting fires rather than training. So many of our staff received hands-on experience, and we've had a significant upgrading in their certification levels.

MR. WHITE: Thank you.

Another area that was curtailed down to almost zero in this particular area of fire suppression and management of lands throughout the entire year was the travel budget, not the training but the travel. I suppose I'll back up a second and say, in recognition of the fact that there are other places in the world that do intense forest management by design, fire suppression being part of that, that there always is a great deal to be learned. For about seven or eight years, I gather, there was no budget and no real input from the outside. Has that been taken care of in this year's budget, or at least a portion of it?

8:55

MR. MAR: The province is a partner in a number of different forest management initiatives; as an example, the foothills model forest, which has precipitated a great deal of research: very positive, very beneficial, and very highly regarded throughout Canada and around the world. As a matter of interest, for example they have a grizzly bear research project that goes on in the foothills model forest that has been presented to the Chinese government as being a model of how they may wish to look after giant pandas in their bamboo forests in China. So it's very highly regarded, again not only in Canada but in other parts of the world as well.

The province has also been a partner with respect to the model training forest in partnership with Grande Prairie College in the city of Grande Prairie. That, I think, will provide an extremely valuable

training ground for young foresters in the area of silviculture. Also, the province has participated with a forestry science management council in collaboration with the University of Alberta. Again that has provided outstanding research, as an example in answer to your specific question, on the subject of fire suppression.

I'll have Cliff supplement on any of those areas or add to it if he so wishes.

MR. HENDERSON: Thank you. We have continued quite an aggressive program to stay involved with national and international fire programs, and we are very involved with the Canadian forest fire centre out of Winnipeg. We attend all the meetings, and this spring there's a national fire equipment show in Nova Scotia, I believe, and we will have representatives there. So in North America our fire agency and program is regarded as one of the top programs.

MR. WHITE: To move to another and related area, of course, the minister said earlier that both the recommendations from the Auditor General in the years '97-98 and '98-99 and from the KPMG report on fire suppression and preparedness in '98 and '99 have been implemented. I don't expect the minister, but perhaps the associate deputy could outline what those areas were and the implementation of those.

MR. HENDERSON: I'm just seeing which specific area you'd like within his recommendations. We have prepared for and announced an early fire season. We have defined or reviewed our cost accounting for our fire programs. Are there other areas that you'd like detail on?

MR. WHITE: Unfortunately, I don't have the report at hand, but the minister said that all had been implemented. Perhaps it's not the time, sir. Perhaps, if you do have a moment afterwards, it would be advantageous to do a two-column recommendation. This member wouldn't expect an exhaustive study, of course. I mean, I'm not looking for that, but that would be handy to respond to in writing.

The other area I'd like to move on to is the question of forest resource allocation. It not only is confusing to the outside world, the business world or the environmental world – the relationship of this department to the Associate Minister of Forestry I suppose is the first question, recognizing that forest allocation is, I believe, still with this department and the final say. Some comment on those two areas, sir.

MR. MAR: If you look at a forest management agreement, or FMA as it is often referred to as, what you will find is that probably 75 or 80 percent of such an agreement relates to environmental practice and standards, 15 percent of it relates to the business case for the management of the area, and the environmental standards that are established and negotiated under FMAs remain the responsibility of this department. There is, of course, a cosign-off on such agreements with the Associate Minister of Forestry. But in simple terms the environmental standards remain the responsibility of the Department of Environment, and the business case and the promotion of the forestry business is the responsibility of the Associate Minister of Forestry.

With respect to allocation, the critical principle for the Department of Environment is that while recognizing that we have an abundant resource, we must treat it in such a way that it will always be abundant as a renewable resource. Our principle precipitates rules that say that we cannot cut more timber than the forest can regrow over a period of time, so we have plans in place that recognize that we have to look 80 to 100 years out to determine what our allowable annual cut is for a particular year. We are very conservative with

respect to establishing what the annual allowable cut would be, recognizing that we always want to preserve this particular important resource.

I'll have Cliff Henderson talk about the calculations of allowable annual cuts and what percentage of our forests are cut and harvested each year.

MR. HENDERSON: Our ministry has the responsibility and the mandate to approve the annual allowable cuts for the province. Alberta is about 98 percent committed to our approved annual allowable cut, which is around 22.3 million cubic metres of wood.

The role of FID, or forest industry development, is to allocate any unallocated or unowned allowable cut through whichever process they use to enhance Alberta's development opportunities for the industry. To set the annual allowable cuts, we do it through a process of first obtaining a current and accurate inventory of the landscape – trees, other resources – and then it's about a three-year process to arrive at an approved annual allowable cut. Within that process there are stakeholder reviews and public reviews, which are the responsibilities of the various FMA holders to carry out.

MR. WHITE: There have been two substantive publications on the allocation of forest resources in this province. Two of them cited oil and gas activity as taking a great deal of the resource and it not being calculated because it's a whole different department and is reported after the fact to your department as to what actually has transpired. With 98 percent of the forest allocated, isn't there a better way of managing the allocations, with the inclusion of the advancement of oil and gas, cutlines, and the like?

9:05

MR. MAR: Without knowing what reports you're referring to – and I don't, I'm afraid – it would be hard for me to comment, but keep in mind that the allocation of forests is, again, based on a very conservative set of assumptions. If memory serves me correctly, the last year full statistics were available for was 1997. In 1997 .59 percent of the total of Alberta's forests was harvested, less than 1 percent. I think in that particular year we may have even lost more to forest fires than to harvesting. I'd be happy to see the reports that you're referring to. I don't have them now. I'm not sure which ones you're referring to.

To come to what is the annual allowable cut requires a number of assumptions with respect to what can be allocated. When you take into account national parks, provincial parks, protected areas, and wilderness areas and you start reducing all of those, then you get to a figure where you can say: that area can be harvested. Only a small percentage of that which can be harvested is actually harvested. I'll be happy to review your question on the record and provide you with some of the statistics with respect to how we actually get to the actual amount that is harvested in a particular year.

MR. WHITE: First of all, I'll endeavor to have those reports delivered to your attention.

The .59 percent in the calculation, as I understand it, includes all of the forests of the province, which would include all the parks and all that is included. Some augmentation of that particular statistic is required. That is not of harvestable – well, it's harvestable in the true sense.

MR. MAR: That is correct. It is .59 percent of the entire inventory of forests throughout the entire province. As I indicated, we take out that portion that's in national parks. We take out that which is in wilderness areas. We take out provincial parks and so on and so

forth. It's correct that less than 1 percent of the total forest in the province is harvested. I can find for you – and I'll undertake to do so – the actual percentage that is harvested in a given year of the portion that is permitted for harvesting.

MR. WHITE: Just by way of illustration, 98 percent is allocatable.

MR. MAR: That's right, and that's not of the total number. As long as you understand that.

MR. WHITE: That's not of the parks and the wild reserves and urban areas and the like. You're not about to include the 40-year-old or 50-year-old mountain ash in front of my house, I'm sure.

In any event, the question still remains. As the oil and gas activity in the province is substantial and is increasing in the areas where the yield is considerably less, the utilization of a property can be fairly devastating to an FMA holder or a quarter holder and with very little compensation or, it appears, little planning and co-ordination between your department and those that allow the activity to occur. It begs the question: how conservative are the AAC calculations if this encroachment on the resource is not managed by your department?

MR. MAR: Again, I'll be happy to look at the report that you refer to and review it and provide you with my response accordingly. As an example of the conservative nature of calculating the annual allowable cut, we have, to my knowledge, timber quotas or FMAs that contemplate an annual allowable cut that is actually much lower than that which could actually be taken because of the uplift in the number of trees; that is to say, the amount of fibre that is within a particular area. That uplift may be in some cases 30 to 40 percent higher than was contemplated in the calculation of the allowable cut in a particular area. So there is some conservatism with respect to those calculations.

MR. WHITE: The question was on the management of the resource without having control of the oil and gas, that which is taken out for the exploration of same and its not being in the control of this department. That concerns ourselves, of course, and it concerns parts of the industry.

MR. HENDERSON: Maybe I could just add a bit more information to the minister's remarks. First, our allowable cuts are conservative. We use a 200-year cut projection, even flow for 200 years, so it's a very long, forward-looking annual allowable cut that is in place in the province. We don't only provide for unexpected land uses through the conservative nature of our allowable cut. We also carry out a process of integrated resource management on our landscape, and we do program the activities. We are improving on how we do this so that there is a lighter footprint in general on the landscape from both the timber industry and the oil industry.

The oil industry has also improved how they do business to reduce the timber losses and the impact. One example is limited-impact seismic lines, where the lines now instead of being dozer cut are hand cut and are very narrow, in fact nearly undetectable when you go through the forest. So there's been some very significant progress made.

The other aspect is that when any land disposition is approved, the FMA holder signs a consent for that disposition, and they also double-check to make sure that it's within the scheme or the plan for the detailed forest management plan. We do maintain projected losses from the oil industry in our allowable cuts, and these are updated once every 10 years. So we're very honest to that process.

MR. WHITE: The last question in this area relates to this long-term planning, the 200-year planning. I think it's generally agreed that in the last 10 years science in the nation and around the globe said that there's some global warming occurring here and that the significance of that change is incalculable. If 98 percent of the current resource is allocated and the annual allowable cut is based on a 200-year projection of growth, then without the complete knowledge of what actually is occurring and could occur in climate change, how can the citizens of Alberta be assured that the desired results and, as the minister quite rightly pointed out, the desire to maintain this resource in perpetuity can be rationalized, if you will?

MR. MAR: I listened carefully, but I'm not sure if I understand your question.

MR. WHITE: I shall try it again then. The resource is allocated to 98 percent on a 200-year basis. Science tells us that incalculable and major changes in climate are occurring. Climate does affect in a very direct way the growth pattern of a forest, and you say that you're calculating on a conservative basis. How can you rationalize the two statements?

9:15

MR. MAR: I'm not sure if I'm competent to answer that question from a scientific basis, because the impact of global warming is not exactly clear. I mean, there are those who would suggest that global warming may in fact improve our climate and allow trees to grow even better than they are now.

I might have to defer to Mr. Tupper to sort of give us some science on the area of climate change. He thought he was getting off easy today.

MR. TUPPER: I was hopeful.

In fact, the minister's answer is correct. The models that the federal government has run so far to try and show the regional impact of global warming suggest that Alberta would be considerably warmer than it is now and that the growing season, including for agriculture, could extend as far north as Yellowknife. Of course, there have to be the proper soil conditions for that kind of thing to happen.

The other aspect of global warming in any case is that the globe has been warming for a very long time. The issue here that we're really facing as a nation and as a world is the speed at which that is now occurring. Man's impact is certainly clear in much of the science, but there is still room for dispute, and that's going on internationally. The reality is that it's the speed of the change, so adapting to it has to happen quicker. It may even be within lifetimes as opposed to several hundred years. So with respect to the question you had, the minister I believe is quite correct given the models that are current at the moment, which show Alberta experiencing considerable warming in its climate and the growing season moving quite a bit north.

MR. WHITE: A supplementary question. Is the water management not a concern? I recognize that a minor change in water table elevation or a change in surface water will dramatically affect the growing conditions of the current species. Therefore, even though the growing season could be extended and all of the other factors and the soil conditions certainly wouldn't change, there could be a net and a dramatic lessening of the harvest. It could be. I mean, this is purely speculative, but the nature of the question is: how can it be conservative if this is still a substantive unknown in the hinterland, of course, in the areas we're talking about?



MR. MAR: It's conservative because in all of our policy decisions, whether we're talking about trees or whether we're talking about species, we use the best available science possible. There are all kinds of what ifs and could's, but we use the best knowledge that we have available.

Just on the broader issue of water, that is an area of concern that I think ought not to be understated. The chairman would certainly be familiar with the Milk River aquifer, down around his part of the province. There are some 1,800 wells that draw water from that aquifer. Roughly 1,200 of them are decommissioned wells that are unregulated, so the Department of Environment in collaboration with the people that work in that community and the agricultural community and the town of Foremost and others have been working on an education program to decommission those wells and cap them and to put in valves to regulate those wells that are pumping water out of that aquifer, because the levels have dropped over the last 20 or 30 years.

Water is an absolutely critical resource. There is a great deal of it out there, but that doesn't mean that we should treat it as if it were an unlimited resource. It is not. Programs like the one on the Milk River aquifer are important ones and are the types of models that we would use and like to see used in other parts of the province and other parts of Canada.

MR. WHITE: Those are all the questions I have at the moment. Thank you, sir.

MS CARLSON: Okay. I have some more questions. First of all, I'd just like to talk about forests for a moment as well. I'd like an update in terms of where you're going with the integrated management plans for forests where FMAs or quota holders share responsibility for both softwood and hardwood. I know that most of the FMAs are not managed in that regard right now, and I'm wondering how that's going and what your plans are.

MR. HENDERSON: Well, in fact we do manage our land bases for both species, and the detailed forest management plan that is submitted by a forest management holder – for example, if he's a coniferous operator – has to reflect a management strategy approved by the minister to provide for the sustainability of the deciduous disposition holder in his area. So we do require both sides of the sector, the coniferous and the deciduous, to submit compatible plans.

MS CARLSON: We don't seem to get such a favourable response from operators who are on the land now. They seem to think that the department is some ways away, in most cases, from adequately managing that, and in some instances it's because, as I understand it, the FMAs have older plans in place. Could you comment on that?

MR. HENDERSON: All the FMA holders are required to submit a new detailed forest management plan once every 10 years, so our plans are in various stages of currentness up to that 10 years. Some plans are only two or three years old. In all of these plans we do provide for the sustainability of either. A coniferous holder or a deciduous holder has a different authority to harvest timber than a forest management holder.

Certainly there are some discussions regarding opportunities between the two disposition holders, but the minister's mandate and authority is to provide direction to the FMA holder to develop and provide a sustainable plan for the other operator in his area, and we are doing that. I guess some of our operators vie for opportunistic solutions rather than the best solution.

MS CARLSON: In terms of this are you taking a look at the

mandate being trying to replicate as much as possible a natural forest environment?

MR. HENDERSON: Our regeneration standards provide for the return to the land base of a forest that is similar to the one that was grown there. We are in the process of developing a broader and more scientific approach to how our harvesting should occur in a landscape by, I think, a more natural way, with larger regeneration areas and more structure on where we harvest so that it's more in tune with nature rather than the older system of small square blocks.

MS CARLSON: And how much of your budget is spent on the science of that process?

MR. HENDERSON: I don't quite understand.

MS CARLSON: As I understand it, there are a lot of studies being undertaken to determine what the best management practices are. Does the department contribute to that investigation, to the research and development side of that, or is that solely picked up by industry?

MR. HENDERSON: Well, I would have to have Bruce provide the exact dollars. We participate in three primary ways. We have provided funding to NCE and the model forest, and we provide annual funding to the Alberta Research Council for studies directed at forestry landscape type research. We also have requirements and participation with industry through their research programs, whether it's research carried out by FRIAA or company-specific research.

MS CARLSON: Okay. That's excellent. I wouldn't mind having those figures, but if you could provide them in the future, that would be all right. Also, I would like them, if it's possible, compared to what your expectations are in terms of what industry provides for dollars in that regard. That would be helpful.

MR. HENDERSON: We can do that.

MS CARLSON: I'd like to say that what I see happening out there in the last few years is certainly encouraging. I think that industry is working very hard to be responsible keepers of the landscape.

9:25

MR. MAR: If I could make one observation in that regard, I think that industry, whether it's the oil and gas industry or the forestry business, has been much more conscious of their environmental stewardship role, and I think it's because of a large public demand for the same. We only need to look at examples of what happened to the forest industry at a place like Clayoquot Sound in British Columbia. I think other stewards of the land, forestry or oil and gas, have looked at those examples seriously and realized that the last place they want to be is in a situation like that, where their products may be boycotted in places like Europe or somehow their practices associated with not being environmentally sound. So I think part of the reason is that the overall public consciousness for environmental stewardship has compelled industries to be much more proactive in their practices, and I applaud them for it.

MS CARLSON: One last forest question. In the event of a large forest fire that significantly impacts an FMA or a quota holder, what happens?

MR. HENDERSON: Well, if we have a forest fire that exceeds the annual allowable cut of that specific unit by more than 2 percent

cumulative for the five-year control period, we require the company to complete a new inventory assessment of the burn area which considers the effectiveness of the salvage operations, and immediately after, if it's a large fire, we reduce the annual allowable cut based on what is supplied and verified by our foresters.

MR. WHITE: We understand that the Bighorn wildland recreation area may be harvested now. I'd rather have the assurance that that will not occur, but if it is to occur, could we understand the philosophy of it in light of the conservative nature of the allocations and the extent of that harvest?

MR. HENDERSON: Okay. There is no intent to provide large commercial harvesting within the Bighorn wildland area. As you know, the Sunpine forest management area stops shy of the Bighorn area. There are some areas that have a higher fire risk, timber around communities such as Nordegg and the Bighorn Indian reserve settlement area, and we are in the process of discussing with the local residents some programs that will reduce the fire hazard to the communities and as well incorporate into it some wildlife or biological improvements which could be as a result of timber harvesting.

So there is no foreseen goal to have commercial harvesting, but we realize that the age class of the timber there is becoming very high risk to fire, and there is some responsibility to provide preventative suppression programs to deal with trying to suppress a fire before it hits the communities. That's what we're reviewing now.

MR. WHITE: Would it be safe to say that that which is harvested in the wildlands area will be specifically to protect the habitable areas and some of the wildlife areas in the way of fire suppression or pre strike? Is that the philosophy behind the taking of the timber in the wildland area?

MR. HENDERSON: Yes.

MR. WHITE: Terrific. Thank you, sir.

The last area I'd like to address today is a report published by the Senate which dealt with forest management in North America particularly, not specifically in Alberta of course. One of the recommendations was that the commercial tenure for harvesting in a particular area be extended. This particular province has forest management agreements, FMAs if you will. With a 200-year horizon for planning of forestry and a growth pattern, depending on where you are in the province and where your FMA is from, in the area of a minimum of 60 years and sort of a maximum of 120 or so, how is it that FMAs are so short that it would put a company's planning in intensive forest management at jeopardy if their FMA is a 25-year when the payback period, if you will, on an intensive forest management could be 40 to 60?

MR. HENDERSON: Alberta, as you know, has a 20-year tenure for our FMA agreements, but through a review of the FMA tenures headed up by MLA Wayne Jacques, we did provide for interim reviews and extensions. Now after 10 years from date of signing, an FMA can be renewed and another 10 added on to the 20-year term. As long as the FMAs meet our obligations and requirements, they are essentially an evergreen document or tenure, so every 10 years there's a rolling 10 added on if they meet our obligations.

MR. WHITE: Coupled with that recommendation for much longer tenure and inseparable from it was a recommendation for a citizen review, a five-year. Not totally citizen of course; there would be

expert evidence and public hearings would be held to test the efficacy of the five-year plan that had just been completed and therefore extend the period and design the environmental inhibitors, I guess, in the FMA for the next 10 years. Is that the effect of your new plan, that the company can actually look out and say: I can invest long term here, because all I have to really do is hit these targets. Is the effect of your change in plan of FMA review the same on a company and their harvesting as this Taylor report?

MR. HENDERSON: From the feedback I've received from most of the companies, they are comfortable with this rolling renewal process. They see that if they meet their obligations they will receive a renewal, and Alberta has always been very good in honouring our contracts. So they are reviewing these long-term opportunities.

MR. WHITE: Good. Thank you, sir.

9:35

MS CARLSON: Thanks. I have a number of other questions.

First of all I'd like to make a general comment about the number of letters I've written to you, Mr. Minister, over the past year. I know they must sometimes drive your staff crazy. They're certainly not make-work projects. They're almost entirely as a response to questions asked when I'm out around the province or those that come directly into our office, so I do appreciate your timely responses to them. The information provided is generally very informative, and if not, we ask some follow-up questions. I prefer to continue in that fashion rather than a more confrontational mode in terms of some of the other options open to us. So thanks to your staff for their response in that regard.

My next set of questions are in the fisheries and wildlife management area. We see that there's a little more than a doubling of the budget in this coming year. Could you give us an overview of where those additional dollars are going to be spent?

MR. MAR: Bruce.

MR. PERRY: I'll probably have to ask Mr. Barrett to help us, as well. Did you have a specific section? The budget is broken down between headquarters and a region, many of the activities specific to a region. Do you have a period?

MS CARLSON: I wouldn't mind a general overview in all regards there.

MR. PERRY: Well, perhaps on the program side, because you can get into real depth with the numbers, Mr. Barrett would just start with the activities.

MR. BARRETT: You want an overview of the fisheries and wildlife program activities and the enrichments particularly?

MS CARLSON: Yes.

MR. BARRETT: The enrichments are primarily related to the endangered species, just about exclusively, with minor increases elsewhere, whether we have co-operative programs for resourcing in wildlife populations in parks and some fisheries inventories in the parks, but the biggest single increase, much bigger than all others, is in the endangered species program.

Now, I can take you through some of the typical activities in both fisheries and wildlife management divisions, if that is your wish. With our fish culture program, I could take you into an inventory

program, the season-setting process, our working relationship with endangered species, whatever you wish.

MS CARLSON: Well, let's talk about fish first of all. We still have a problem in the province in terms of maintaining fish stocks. So if you could tell me what you've discovered in terms of what you've been doing that hasn't been working and what you think is working and how long it looks like we're going to be having a problem in that regard.

MR. MAR: Let me start by saying that the pressures on our fisheries in the province of Alberta are serious. If you look at the number of lakes that have fish in them in the province of Alberta, it would number less than a thousand, and if you look at the number of fishers who get licences each year, it would result in numbers in the hundreds of thousands. I think something like 300,000 licences are issued each year.

The simplistic calculation I think is revealing, because when you look at the number of anglers per lake in Alberta, it would be perhaps 300 or 400 to 1. Compare that to the province of Saskatchewan or the province of Ontario. In Saskatchewan there are roughly 100,000 lakes with fish in them, and in the province of Ontario I believe there are about 200,000 lakes with fish in them. The number of anglers per lake in those provinces is in the single digits, two or three fishers per lake on average, compared to hundreds per lake here in the province of Alberta. So it is a serious issue, and we have a management program that reflects that, which is very different from what you'll find in Saskatchewan or Ontario. I think that's a good thing to do, because it's a very different set of conditions that we have in this province.

MR. BARRETT: Thank you, Mr. Minister. That backdrop is why we have to be perhaps more aggressive and why some things are changing here. Let me just take you back a few years. I don't think there's any doubt, with the increasing pressure and mobility of our increasing population, that the impact on our fisheries was found to be ongoing, and that would extend back through the '70s and the '80s.

We've had some of these conversations earlier, but let me just start with what would typically have been done. We'd do an intensive population investigation on a lake or two or three or on a river or two or three. To do a detailed population assessment might take one to two to three years, depending on the complexity, and we would bring in new regulations for that body of water. Meanwhile, all kinds of other lakes and rivers were undergoing similar pressures. So it became clear that for a piecemeal, one-off water basin, while those studies were continuing, it was not acting and giving us responsive enough information to deal with the broader picture, the broader issue.

So we started some years ago – and I'll bring you right up to the present in a moment – with the first one, the bull trout. We looked at and introduced a provincewide zero harvest limit on bull trout. I'm happy to report that we are seeing rather substantive increases in some bodies of water in the river systems where we have that, most notably in some of the Kananaskis Country and some of the other rivers in central Alberta, and we continue to monitor those and are evaluating the options of reintroducing them to key bodies of water where there's not a substantial population for effective recovery. By and large, the response has been good.

The next issue that we dealt with provincewide was the one of walleye, where we had a rather large-scale decline, by and large, over a lot of our lakes over a prolonged period of time with the increased targeting of these species by anglers and more mobility of

boats, fish finders, tournaments, all manner of things. In that one we've introduced the provincewide system of classifying lakes into trophy, stable, vulnerable, or collapsed. We did this so that we could bring in some protection for all water bodies while individual studies reveal a change from one category to the next as we get the detailed information. But that brought in major changes with, I believe, major impacts.

The thing to remember here in terms of the timing – that was only four, five years ago – is the time it takes for maturity. We will not expect to see a change in the status until the fish that are in the lake have been allowed to mature, to spawn, to produce new recruitment; on average, eight to nine years for a female walleye to reach maturity. So we're looking, quite frankly, at a 10-year plus period to turn it around for walleye.

We are monitoring lakes. We're monitoring community effort over a wide amount of lakes. We're doing some specific studies on a few of them, and we have continued our introduction where we're trying to recover populations, like in Lac La Biche, like Pigeon Lake in the Wetaskiwin area. Those programs continue. I think we have to be more patient. I believe we have a very aggressive approach to management of fisheries, and we're picking them all up, so we have very few that aren't being caught in the gillnet of improved management. We still allow the fishing to occur, but we're reducing the killing or the harvesting of fish and allowing them to mature.

The next – and it happened last year – was the implementation of the new harvest regime for pike. Indeed, that system, generally speaking, put a 63-centimetre minimum size for pike, allowing them to mature essentially before they are harvested. Now, the one benefit that pike will have – I expect to see a quicker response here. Walleye tend to get to a size where they make good pan fish before they're mature, which is, as I said, eight to 10 years of age, whereas pike tend to mature in good conditions at three to four years of age, and they're still quite small. So I expect with favourable water conditions a quicker response with pike.

#### 9:45

Also, we've got to think that over the last two or three years, as mentioned, fires brought a drought, and it's the spring-flooded grassland/marshland habitat which is primarily the spawning beds of pike. A drought with little runoff does not do us a lot of good in terms of recovering populations in the whole northeast, which has been the heart of our pike. The walleye situation, because they spawn in running water, in streams primarily, has not been helped by the drought in the last few years.

This year we're implementing a spring closure, essentially, for the pike and perch lakes from essentially April 1 to about May 19, just before the long weekend, in most of our water bodies. I think that's going to have the added benefit of protecting the spawning areas.

The one I didn't mention to date was that two years ago we introduced the new east slope regulations for cold water species, primarily the trout, Rocky Mountain whitefish, and grayling. I think that has been overwhelmingly successful. Again, it's not very long in terms of its implementation phase, but we hear nothing but very positive feedback from folks that are highly engaged and interested in those east slope populations.

I think we're going to see some fairly immediate benefits there, not unlike what we saw with the bull trout, but it's going to be quicker, as well, because the base population was in place for many of those species. We have something like 27 or 28 catch-and-release waters in Alberta now, and I think we're leading North America in that regard. The feedback, as I say, is extremely positive.

Now, that's kind of an overview of fish. We can provide more detail if you'd like.

MS CARLSON: Like we have in other budget years.

Just one question there, and that's in terms of compliance on the catch-and-release side of things. I hear increasingly from people who fish that they are concerned that there isn't a high level of compliance always. I particularly hear those concerns about Slave Lake. If you could comment on that.

MR. BARRETT: We are, likewise, concerned with compliance. Slave Lake has the potential to be impacted in four different ways, most principally from the recreation angler who may or may not be willing in some cases to stay within the limits. The second way is, of course, the commercial fishing. A third way is the domestic licences by native fishermen, and the fourth way is the illegal setting of nets and marketing of fish.

We have in the last three years paid special attention to Slave Lake and will continue to do so from all levels, both the visible and uniformed officers and some other folks who are not quite as visible, in some of our covert operations. Those things continue at a number of sites around the province. I can't go into any specifics there for obvious reasons. We have put new officers and will be putting two new officers at Slave Lake this April to increase the permanent complement of staff in that area.

One other thing that we're doing. We're looking at compliance on a broader basis as it relates to fisheries, and we are setting up the elements of what would be a graduate research program to actually investigate and provide more science to the issue of compliance. We will relate and analyze not only how well people are complying with the regulations but the impact of that noncompliance on the populations. This would give us a science basis to decide and target our enforcement efforts, the likes of which we really haven't had in the past, nor is that specific data available in the literature to the same extent. So it would be somewhat of a first in some of the lakes that we're talking about, particularly in the north-central and northeast. They would be the ones where we have a lot of background information that we would use in this study.

We'll also be putting one compliance enforcement officer in each of our six regions this year to support, analyze, and direct efforts related to the enforcement and to see in a more focused sense of how in fact we can be more strategic and more quantitative in assessing the impact of our efforts and how we can work more collaboratively with all environmental resources – like, in forestry it's the biologists and everybody in there – bringing those various interests and activities together. So we're doing quite a few things in the area of compliance, and those will be kicked off in April of this year.

MS CARLSON: That's good. That reminds me of an area where I think the government doesn't comply with its own regulations, and that's with regard to fish screens on irrigation ditches. Could you comment on that, please?

MR. BARRETT: The issue of screens in irrigation facilities obviously is a complex and ongoing issue, as you're well aware. Many of those facilities were in fact built decades and decades ago by the federal government and turned over to us without those, when no one was thinking along those lines at that time. A lot of the older facilities and the major facilities we acquired in that regard.

Now, at the new ones that we're doing – and I'll come back to some of the problem ones – such as Pine Coulee, we are building, at some considerable cost, a fish screen device and evaluating the effectiveness and the design parameters. For two years, though, for all the major ones like the Carson diversion and others we have had a federal/provincial group looking at it with the specialized committee whose primary interest is fishways, fish passages and diversions,

again in a focused fashion to try and evaluate what it is that can be done on such a major waterway that would have the effectiveness of diverting fish without killing large numbers of small fish because of the volume of water and the currents created in those areas.

That work is ongoing. We will be looking at efforts and results from the Pine Coulee one and others, ongoing investigations to see what is possible. It's not small money that we're talking about here for a potential retrofit, and it's unlikely to be anything as close as a simple screen because of the volumes and flow of water and the debris in them, which would quickly clog and completely disrupt the whole system. It's likely got to be some other subtle deflectors in terms of creating different current approaches that would tend to move fish by their natural tendency away from being entrapped in the water flow.

We also have had the leading hydrologist in Canada, from the University of Waterloo, engaged in this on a contract basis to help us design these things. The experience he's bringing is that he's worked with intake flows to some of the nuclear power facilities in Lake Ontario and others, where they've looked at sound barriers, thermal screens, flow mechanisms.

So it is complex. The problem persists in a lot of areas. It's not that we're not working on it, but we have a lot of work yet to do. I agree with you there.

MS CARLSON: We'd certainly like to be kept apprised of what's happening in that regard. I have steered away from that particular issue in the Legislature at this time, but I'm getting increasing pressure to ensure that the issue is addressed, so if you have studies, we sure wouldn't mind having copies of those. As you make some progress, if we could be kept informed, that would help us inform people throughout the province so that this is an issue we can deal with outside of question period.

My biggest concern about the fisheries and wildlife management – and you've seen some written questions from me on it – is that the total budget for fish and wildlife is now combined. It would be a lot more beneficial for us if we could see the moneys that are spent on fisheries and the moneys that are spent on wildlife independently, not only because I think fisheries management is a huge issue in the province right now and we'd like to be able to monitor that on an ongoing fashion, but also because we get a lot of concerns from the general public, from people who believe that a disproportionate amount of money is spent on wildlife as compared to fisheries. Now, I can't even comment on that because we can't see how those respective budgets are changing over time when they're combined. Any comments on that?

MR. MAR: No.

MS CARLSON: No? Okay.

So a couple more on the endangered species. You talked about a large amount of the increased dollars being allocated to that, and I understand that \$25,000 of that is the Endangered Species Conservation Committee scientific advisory. I'd like a little better breakdown in terms of what's happening with the money. There are going to be status reports for the main committee to evaluate, I expect, and as a result of that there will be some recommendations implemented. Have you targeted any dollars to implementing recommendations, or have we not got that far? Could you just elaborate on that for me?

9:55

MR. BARRETT: I think you're quite correct, as in most cases and perhaps in all cases we haven't got that far. What the main focus is on is that we'll be looking at the status of species that are thought to

be vulnerable or endangered. Essentially the activity in the next period of time – in the next broad-scale activity we'll be doing the detailed assessments of the status of those and, more importantly, developing a recovery plan, the essence of a recovery plan. That will obviously have to be developed, of course, in conjunction not only with the scientific advisory committee to the Endangered Species Conservation Committee but with the local landowners or land base, whichever is involved with what species we're talking about.

The major effort is that we'll be determining the status, we'll be developing detailed recovery plans, and we will then be identifying other species that perhaps need to have the focus of similar activities over the next number of months in the next year. So the recovery plans will be brought forward and implemented; that is obviously the intent, clearly. Those will be implemented as soon as we have an acceptable recovery plan. But I want to make the point very clear that there will be a lot of consultation, as these recovery plans go forward, with affected parties, because we believe that without their active knowledge, participation, and support, these programs don't have a lot of chance to be successful. But with that, we believe they will be successful or have a high probability.

There's the human side of it as well as the science side of it, and both are critical. There are a number of species that currently are already in this process I've talked about for this coming summer.

MS CARLSON: Great. I see that our time is drawing to a close. I'd just like to make a few closing comments.

MR. WHITE: The chairman says we have till 10:15.

MS CARLSON: Oh, 10:15. Okay. Good, because I've only had a page and a half of my questions. I have a few more pages to go.

The regions. We certainly appreciate the breakdown of the regional budgets as they're coming through now. That's helpful, and thank you for that.

Enforcement services you talked about, Mr. Minister, in your opening comments. In terms of increased budgetary dollars there, can you give us the rationale? It looked to us like there was a big experiment happening out there in terms of the decrease in enforcement services, and now there's an increase again. I wouldn't mind some explanation in terms of that rationale. Also, if you could tell us specifically the aspects of enforcement that are being expanded. We just heard the comment: a couple more officers on Slave Lake. What else is happening out there?

MR. MAR: I can't comment knowledgeably on what the rationale was for the earlier reduction in the number of enforcement officers, so I won't be able to address that. With respect to trying to find the right size and the right number of enforcement staff out there, it has struck me during my tenure as Minister of Environment that we did need more people out in the field dealing with compliance issues. As a general observation, following up on your comment that the forestry industry is doing a better job of being proactive in terms of its environmental practices, I would say that I think that is generally true of other industries as well. As a consequence, I believe there is a need to shift away from the Department of Environment prescribing the ways in which industries can meet with environmental standards. I believe the Department of Environment's core mandate is to establish tough environmental standards that are stringent and enforce them but that we not tell industries how to satisfy those standards.

So my general tack in this area is to establish tough standards and not prescribe how those standards are met but enforce stringently whenever those standards are breached. It's for that reason that

there's a greater emphasis on enforcement when it comes to our FTEs, which are going up in number. As the deputy minister already outlined in answering an earlier question, some of the FTEs that are coming over are transfers from another department, dealing with the issue of climate change, but there are quite a number of new conservation officers that are going in – I believe the number is 21 – throughout the province. That is by far and away the largest area that we're increasing in terms of our FTEs, of the 47 in total that we're going up this particular year.

MS CARLSON: Okay.

Special places: when can we expect the puzzle to be completed there?

MR. MAR: Special places has roughly 50 candidate sites that have been nominated and approved. There still remain another 45 to 55 sites that have reached some stage of approval or recommendation, but the expectation is that Special Places 2000 will be completed in the year 2000.

MS CARLSON: You're saying by December 31 of this year you expect it to be . . .

MR. MAR: Yes.

MS CARLSON: Okay. That's great. We're looking forward to some announcements.

Chinchaga. I just want to talk about that for a short while. Certainly we and many people feel that the area that was protected is not sufficiently large, that there is a missed opportunity there, particularly with regard to caribou habitat. The area that's been protected is primarily bog, not the treed area which is also essential in terms of habitat protection. Are there any plans for extending that area, and could you comment generally on it?

MR. MAR: No. But the area is a sizable one; it is roughly the same size as the Whaleback region to the southwest of Calgary. It is an area that has been nominated by a local committee. It has taken into account a number of different values, not just environmental ones but other local values as well. I think the Chinchaga region is an area that is important habitat for more than just caribou. I think it is an exceptionally good candidate site that will be protected.

MS CARLSON: Then in terms of the caribou, what do you expect to do to compensate for their lost habitat?

MR. MAR: With respect to the caribou, I can't comment specifically on that. I don't think I'm able to do that, but perhaps I'll ask Morley Barrett to do so.

MR. BARRETT: Thank you. Perhaps a point that needs to be made here – and I think it's an important one – is that the survival and the success of some of these large ungulates is not primarily linked at all to the special places. The success and the future of them is linked to broad-scale, good forest management in a general sense, and clearly that's why we as a department look at all aspects of improving operating plans and other aspects as it relates to forest management. So it would be short selling a species if we were to focus only on the special places that are in the protected areas as the ecological unit that they require, and I wouldn't want to reinforce that concept. While they're very vital, very important, the ecological complexities are things that need to be preserved, and benchmarks and others factors are only one of the elements needed for the species, espe-

cially those with migratory patterns. Clearly we will continue to work as a department with other industries and be involved to address the needs of caribou on a seasonal basis.

10:05

MS CARLSON: Well, certainly I agree with what you're saying, which only increases my concern in terms of the Chinchaga area. We know that one of the main problems for caribou is not only habitat but close exposure to people and industry. Now they're losing some of their habitat, and they're being increasingly exposed to industry in that area. Could you comment on that?

MR. BARRETT: I don't know that my answer would change substantially, other than the fact that we do deal with the industry and with approvals of the type of seismic activities, the sharing of roads, and as mentioned previously, there have been studies to look at reducing the impact, both short-term and long-term, of industry on the environment. I think that is an issue and a general direction we're trying to adopt broadly, not only with caribou, but it gives it special focus when there are caribou involved because of the sensitivity of the species. That is going on, and we'll be doing some additional inventory work, some additional consultation, and working closely with our forestry brethren and industry to make sure that as we understand more and more of the requirements and the movement patterns, we reflect that in the types of management plans we allow and approve in that area.

MS CARLSON: Thank you. If you could share any of that inventory work and the progress in the area of changes in populations in that region, that would be helpful to us in terms of eliminating some of our concerns.

MR. BARRETT: And perhaps we have some others that would be of interest.

MS CARLSON: Okay. Sure. That's excellent.

Spray Lakes, Mr. Minister. I'm getting more calls and letters of concern on that than I did on the Natural Heritage Act, which was considerable. It all has to do with the Genesis development, as you're well aware. We've seen one of the companies withdraw. What does the future look like in terms of that area?

MR. MAR: I think that the Kananaskis region and Spray Lakes in particular is a jewel of the province, and the main principle from the perspective of the Department of Environment is that we will not allow anything which will dramatically change the environmental values or the wilderness character of this particular area. Albertans have spoken out strongly with respect to their views on Kananaskis Country, and that is what precipitated in early 1999 the release of the provincial government's policy on development in Kananaskis Country, which is: no new development in that area.

At that time there were six projects that had received some previous review, and they had been grandfathered. Of those six projects, one, which was for a golf course, has been withdrawn by Kan-Alta Golf Management. A second one, by the Buffalo Nations Cultural Society, has not demonstrated sufficient clarity in terms of their project or any viability or any financial planning and accordingly has been rejected. One which remains on the books is to build condominiums on what is currently a parking lot at Fortress Mountain ski lodge. That will go through the appropriate process of review.

The remaining three are a Spray Lakes boat tour, a large four-season resort, and a heli-skiing operation. All of those are being

proposed by the Genesis development company. I have ordered that a cumulative environmental impact assessment be done on all three, which from an environmental standpoint only makes sense. At this point the terms of reference have been out for submissions by the public and other interested stakeholders. The review of the three projects by Genesis has now closed, and they are being reviewed by department officials. I can say that I've received a great deal of comment on Genesis projects. I've not seen any positive comments with respect to the particular project, but there is a process which Genesis will have to go through. My expectation is that they will have a great deal of difficulty satisfying all of the public concern in this regard.

MS CARLSON: Well, we're very happy to see that there's a cumulative impact study under way there, and we're looking forward to seeing the results. Your comments in that regard are encouraging.

When do we see the Natural Heritage Act back in the Legislature? I understand that it would be helpful to your department to see that act come back in some sort of a revised way taking into account the public input.

MR. MAR: There's been a great deal of public input into what was then Bill 15, the Natural Heritage Act. Many of the comments that have been made have been very constructive. In particular, I note the comments made by the Environmental Law Centre here in the city of Edmonton. I believe that a number of changes can be made to that iteration of the act that can make it very beneficial. It will be tabled at such time as it can be appropriately drafted, because it is a devilishly difficult piece of legislation in many regards. We want to make sure, as best we can, that we table it in a format that recognizes the public input which has been put forward on that particular bill.

MS CARLSON: It's good news to see that you're still looking at that in a comprehensive fashion. Any chance of seeing it this spring?

MR. MAR: It'll be tabled when it's complete. I cannot comment on whether it would be spring or some other time.

MS CARLSON: Okay. Thank you.

I'd like to move to the performance measures for a moment. I was quite surprised to see that the surface water quality index is just gone. I understand that the new index is being prepared and I expect that the new index will be better, but wouldn't it have been good to at least have had the old index in place until the new one was ready so that we could compare them? Do you have any comments on that?

MR. RADKE: I'm trying to find the reference.

MS CARLSON: Page 99, performance measures.

THE CHAIRMAN: While you're looking for that, we're down to a couple of minutes.

MS CARLSON: Okay. Well, maybe we could get that response in writing. We have a number of other questions that we will provide to you in writing and expect the same excellent answers from you as in the past.

I'd like to put my plug in for this format of budget review process. It's very helpful to us. It's nice to be able to ask questions where we get detailed and comprehensive answers on-site, and I would hope that we could continue this process at least in this department if not in others.

So with that, then we'll conclude our questions.

THE CHAIRMAN: Thank you. This ends the Official Opposition section of the committee. We now move on to the time specifically allocated for the Member for Edmonton-Strathcona. Hearing no question from that member, we'll move to the last section of the committee, which is time allocated to government members.

Are there any questions of the Minister of Environment from government members? Ivan.

MR. STRANG: Thank you, Mr. Chairman. To the hon. minister. First and foremost I'd like to congratulate you and your department for your forethought and understanding of endangered species, for the simple reason that I think it's great you are looking into that, and also for your consideration of allocating some dollars and cents to it. I know you haven't ignored it in the past under the Wildlife Act and I know there has been a lot of work going on, but if we're going to look at recovery and get things going along in that line, we certainly need to show our commitment. You certainly have done that in this budget. I know that will certainly please the Endangered Species Conservation Committee as well as the scientific subcommittee, so I really appreciate that.

10:15

The other thing I wanted to sort of mention. When you were talking about corridors, could you maybe give us a little better insight on the aspect of wildlife corridors? Are you stating, then, that we're looking at the different corridors within the province and also sort of supporting the Y2Y, or are we just looking at the aspect of wildlife corridors within the province of Alberta?

The other question I have is on page 133, under water management. I notice that we've got almost a \$6 million increase there, and I'm just wondering: is that, in effect, because of our incorporation of the Water Act starting January 1, 1999? Do you feel that's the reason we've got more pressure in that?

The other item that I have is on page 137, under forest protection. It might be a little self-centred on my part on this, but on the northeastern slopes I notice that we have had a dry year for the last two years, and this year it looks like we're going to have another one. That area has been really fortunate not to have any fires. We're only looking at a \$76,000 increase, and I'm just wondering why. Maybe in one of my other questions we can clarify that.

Another question. On page 147 we're talking about areas of parks and natural reserves in Alberta. I also have to take my hat off to your department on that. If you look at from 1950 to 1998, we have about 18,153 square kilometres more, and I think that's an awfully giant step. I think we've got to sort of publicize that more. I think we are in the area of conserving.

The one thing that sort of concerns me is the aspect of parks visitation, on the same page, page 147. As you'll see, in 1993-94 we were up to 9,043, and we've progressively dropped since then. I know in some areas there have been a lot of aspects of the implication of costs moving in, the conditions of them. Also, I would strongly suggest that we sort of look at the aspect, especially in the green area, of making the forest companies come to the table in partnership with us on these. I think that displays also to the public that it's multi-use, and I think we should look at that in a stronger light.

I guess the other one I'd like to talk about is on page 148. I realize that in your opening remarks you talked about the aspect of fire. I don't know. I just feel we have to budget more. If you take a look at your line for fire suppression, from this year to last year's budget we're \$2,706,000 down. If you look at forest protection from this year to last year, we're up \$1,340,000, and then under forest management we're also up \$1,759,000. In the total picture, especially with the budgets we have and the conditions we have, I

just think it makes more budget sense to have more out. I realize what you're up against, but I just feel it's important that we do that so people understand the importance of the forest.

I guess the other one on the same page, 148, is the NRCB. I was quite curious on the aspect that you went with \$1,355,000 for 2000-2001, yet we're only looking at \$943,000 being spent. Then in the budget of 1999-2000 we're looking at \$1,249,000, but for 2000-2001 we have an increase.

Then my last question is on codes of practice in the forestry industry. We're getting a lot of pressure – and I'm sure the rest are having the same as what I'm having in my area – as a lot of national companies like Revy are coming out to see the code of practice because of the public pressure that's put on. I'm just wondering: where are we sitting on that as the Department of Environment to co-ordinate this message on the forest practices that we have?

MR. MAR: With respect to codes of practice I'll have Cliff address that.

With respect to forest fires I will say: whatever amount is the appropriate amount for fighting forest fires. We have adopted a very aggressive forest fire fighting policy, and we will continue to do that. I won't say that whatever is budgeted is irrelevant, but whatever is necessary. I would never hesitate to come back in a supplementary estimate and ask for the appropriate amount to fight forest fires and return whatever money may be left over after that. We do have a policy of aggressive fire fighting, which has been confirmed by this government, not just by the department, and we'll continue to do that.

With respect to wildlife corridors, it's an area that we study carefully. As already outlined by Morley Barrett, we are looking at the Y2Y initiative, and we are paying particularly close attention to the whole area in the Bow Valley corridor, which appears to be a real bottleneck in that particular wildlife corridor. We know from our research that grizzly bears range incredibly wide areas. We know from our research that there are in my recollection at least 10 or 12 different grizzly bear studies that are being done in this province. Cougars range even wider areas than do grizzly bears. So wildlife corridors are critical to the well-being of those species.

With respect to the dollar questions that you had asked, I'll turn those over to the deputy minister.

With respect to your questions on page 147 and the numbers of visitors to our parks it's clear that people do get a great deal of value in visiting our parks. I'll certainly be interested to see how that trend continues. It goes currently up to '97-98, and I'd be interested to see what the subsequent years turn out.

With those comments, I'll turn them over to the respective individuals: Morley to talk about wildlife corridors, Doug to talk about the dollars, and Cliff to talk about the codes of practice in the forestry area.

MR. RADKE: Okay. Dealing with the water management question and an apparent increase of \$6 million, you'll notice on page 133 that it shows a decrease in expenses funded by lotteries. The net number is \$5.447 million. What that essentially means is that money from lotteries last year is now part of the general revenue funding. You will, however, see an increase of nearly \$7.9 million in capital investments, and that's additional funding that we're putting into small water infrastructure projects, money that is very welcome because our ability to maintain and rehabilitate some of our small water infrastructure has started to cause us some concern, but we are making some progress on that now.

In terms of the NRCB's budget, traditionally the NRCB has spent as follows.

We look at protected areas. We look at zone 1s. We look at

forest land use zones and other methods to see how they all fit into the puzzle, and that's part of the conscious decision-making and evaluation process. I should also mention that in this province we have marked and continue to study a substantial number of the large carnivores, particularly, and caribou and other species that have special problems in this type of situation, as I mentioned, with the connectivity as it relates to road construction, to mining, to forestry activity.

We're very actively looking at the response of animals to specific land use aspects and planning those activities and understanding better the response to specific activities. It's a very active approach that we have ongoing in a number of sites, even responses to haul roads or major access roads to large gas and oil fields or intensive seismic. We have ongoing studies which will help us understand the impact and the response of wildlife species to these and have marked animals to be able to give not only an anecdotal but very much a scientific, defensible response and understanding to those events.

THE CHAIRMAN: Are there any further questions from government members? Seeing no further questions, I'd like to call for a motion to conclude the discussion of the estimates of the Minister of Environment. Is there anyone who'd like to make a motion?

MR. STRANG: Mr. Chairman, I'll move that under Standing Order 56(8) the designated supply subcommittee on Environment conclude discussion on the 2000-2001 estimates for the Department of Environment and rise and report.

THE CHAIRMAN: All those in favour?

HON. MEMBERS: Agreed.

THE CHAIRMAN: Opposed? Carried.

[The subcommittee adjourned at 10:31 a.m.]