AUDITOR GENERAL
Alberta

Report of the Auditor General of Alberta

JULY 2015

Ms. Denise Woollard, MLA
Chair
Standing Committee on Legislative Offices

I am honoured to send my *Report of the Auditor General of Alberta—July 2015* to Members of the Legislative Assembly of Alberta, as required by Section 20(1) of the *Auditor General Act*.

[Original signed by Merwan N. Saher, FCA]

Merwan N. Saher, FCA
Auditor General

Edmonton, Alberta
June 26, 2015

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REPORT OF THE AUDITOR GENERAL OF ALBERTA

July 2015

Auditor General's Message

We believe the best way for Albertans to get what they want—their government delivering first class public services—is focus on results. We call this results management and published a results management framework in our July 2014 report.

Results management can and should operate at three levels:

- the government level—the key being ministerial oversight (not operational management) of the public service
- the cross-government, deputy minister level—we see this level as a virtual entity. This level is where evidence-based long-term planning, enterprise-wide risk management, resource allocation and government-wide results analysis has to be overseen.
- the individual organizational level—a Crown agency or department, for example, in which the board or deputy minister oversees operational management

Each level will be successful by practicing oversight focused on achieving desired results.

Environment and Parks—Systems to Manage Grazing Leases (page 15)

The department manages some 5,700 grazing leases on more than five million acres of public land on behalf of Albertans. The province receives about $4 million annually from these leases, which are intended for leaseholders to graze livestock. Albertans benefit by having leaseholders who help ensure long-term sustainability of the land, and who protect animals and plants at risk where needed.

Overall, the department's processes ensure that public land used for grazing is in good health. However, the department cannot demonstrate that the grazing lease program is meeting defined objectives. Personal financial benefits are being derived from public assets. Current legislation allows an unquantified amount of personal financial benefit to some leaseholders over and above the benefits of grazing livestock on public land. These benefits arise from compensation for allowing industry operators access to sub-surface resources, and from selling or transferring their lease to another leaseholder.

Environment and Parks and the Alberta Energy Regulator—Systems to Ensure Sufficient Financial Security for Land Disturbances from Mining (page 25)

We repeatedly recommended to the department to implement a system for obtaining sufficient financial security to ensure that the conservation and reclamation of mine sites is completed. This audit confirmed that the department has developed and implemented the Mine Financial Security Program. Thus the focus of our current audit was whether the MFSP constitutes an approach that provides sufficient financial security. For the design and operation of the MFSP to fully reflect the intended objectives of the program, we have concluded that improvements are needed to both how security is calculated and how security amounts are monitored. Without these improvements, if a mine operator cannot fulfill its reclamation obligations and no other private operator assumes the liability, the province is at risk of having to pay substantial amounts of public money.

Environment and Parks—Systems to Manage the Specified Gas Emitters Regulation (page 39)

The *Specified Gas Emitters Regulation* is a key action in Alberta's strategy to reduce emissions. The department's progress in implementing our recommendations has been slow—it has not implemented two of the five, with the result that it still lacks effective processes to manage key risks in its systems to regulate large emitters. The department does not know if oil sands facilities followed its guidance for tailings ponds emissions. With respect to offsets, it lacks assurance that offsets from no till farming are real, and lacks process and evidence that all offsets used for compliance purposes are claimed only once.

The department stated it has faced significant challenges, such as the ongoing cross-ministry review of Alberta's climate change strategy and changes in emission measurement methods. In our view, such challenges don't negate the need for good systems. Such systems are critical for the program to achieve desired results.

Health and Alberta Health Services—Systems to Manage the Delivery of Mental Health Services (page 53)

Severe and persistent mental illness is a chronic disease and should be treated like one. Mental illness affects one in five Albertans during their lifetime. With this follow-up audit, we applied the chronic disease management model—the key to which is a patient-centred care plan—to examine how well the healthcare system is delivering mental health services.

The department has failed to properly execute its 2011 addiction and mental health strategy. There is no need to redesign the strategy; rather the department needs to arrange for it to be carried out. The department also has not done any detailed analysis or reporting on the strategy. Without analysis it is not possible to know if, and how, the plan has led to significant and meaningful change in how mental health and addictions patients are cared for. Alberta Health Services has made important improvements since our original 2008 mental health audits. For the most part, however, the delivery of frontline addiction and mental health services remains unintegrated and allows ongoing gaps in service continuity.

In our opinion, based on the evidence we have from this and other recent audits of healthcare service delivery, AHS has both the mandate and capacity to coordinate the efforts of those entities that should be involved in integrating public mental health and addictions services.

Transportation—Systems to Manage the Structural Safety of Bridges (page 97)

In October 2012 we reported the results of our audit of the department's systems to manage the structural safety of bridges. We had several significant findings resulting in nine recommendations to improve processes.

With this follow-up audit, we can state that the department has made significant improvement to processes to inspect and monitor the structural safety of Alberta's bridges. We did not find evidence of unsafe bridges when completing our follow-up audit procedures. However, processes to contract inspections to independent third parties still require improvement. Also, the department's decisions on selecting contractors lack clarity, and it should complete an analysis on the cost effectiveness of contracting out these services.

July 2015 Recommendations

We conducted our audits in accordance with the *Auditor General Act* and the standards for assurance engagements of the Chartered Professional Accountants of Canada.

This report contains four repeated and seven new recommendations to government. The repeated recommendations have been made because we do not believe there has been sufficient action taken to implement our previous recommendations. We also state that 11 prior recommendations have been implemented.

As part of the audit process, we provide recommendations to government in documents called management letters. We use public reporting to bring recommendations to the attention of Members of the Legislative Assembly. For example, members of the all-party Standing Committee on Public Accounts refer to the recommendations in our public reports during their meetings with representatives of government departments and agencies.

The auditor general is the auditor of every ministry, department, regulated fund and provincial agency. Under the *Government Organization Act*, ministers are responsible for administering departments and provincial legislation. Deputy ministers are delegated responsibility to support the minister in his or her role, and to act as the chief operator of a department. Ministers may also establish any boards, committees or councils they consider necessary to act in an advisory or administrative capacity for any matters under the minister's administration. A minister is responsible for oversight of the work and actions of the department and any provincial agencies under his or her administration. However, we make our recommendations to departments and provincial agencies rather than to the minister directly given the delegated operational responsibilities and that they are in the best position to respond to and implement our recommendations. With respect to recommendations related to ministerial oversight of a provincial agency, we generally make the recommendation to the department supporting and providing advice to the minister.

We believe all of the recommendations in this report require a formal public response from the government. In instances where a recommendation has been made to a board-governed organization, we expect the organization to implement the recommendation and report back to its respective government ministry as part of proper oversight of the organization. By implementing our recommendations, the government will significantly improve the safety and welfare of Albertans, the security and use of the province's resources, or the oversight and ethics with which government operations are managed.

Reporting the status of recommendations

We follow up on all recommendations. The timing of our follow-up audits depends on the nature of our recommendations. To encourage timely implementation and assist with the planning of our follow-up audits, we require a reasonable implementation timeline on all recommendations accepted by the government or the entities we audit that report to the government. We recognize some recommendations will take longer to fully implement than others, but we encourage full implementation within three years. Typically, we do not report on the progress of an outstanding recommendation until management has had sufficient time to implement the recommendation and we have completed our follow-up audit work. However, when we consider it useful for MLAs to understand management's actions, we will do a progress report.

JULY 2015 RECOMMENDATIONS

We repeat a recommendation if we find that the implementation progress has been insufficient.
We report the status of our recommendations as:

- **Implemented**—We explain how the government implemented the recommendation.
- **Repeated**—We explain why we are repeating the recommendation and what the government must still do to implement it.

On occasion, we may make the following comments:

- **Satisfactory progress**—We may state that progress is satisfactory based on the results of a follow-up audit.
- **Progress report**—Although the recommendation is not fully implemented, we provide information when we consider it useful for MLAs to understand management's actions.

SYSTEMS AUDITING—NEW AUDITS

Environment and Parks—Systems to Manage Grazing Leases

Page 20

RECOMMENDATION 1: CLARIFY OBJECTIVES, BENEFITS AND RELEVANT PERFORMANCE MEASURES

We recommend that the Department of Environment and Parks define and communicate the environmental, social and economic objectives it expects grazing leases should provide all Albertans as well as relevant performance measures to monitor and ensure those objectives are met.

Implications and risks if recommendation not implemented

Without clearly defined objectives and relevant performance measures for grazing leases on public land in Alberta, the department cannot ensure those objectives are being met, or that Albertans are receiving the benefits they should.

Further, without relevant performance measures and effective systems to monitor and analyze them, the department cannot know what it must do to improve its processes to better manage grazing leases on behalf of Albertans.

Environment and Parks and the Alberta Energy Regulator—Systems to Ensure Sufficient Financial Security for Land Disturbances from Mining

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RECOMMENDATION 2: IMPROVE PROGRAM DESIGN

We recommend that the Department of Environment and Parks, as part of its regular review of the Mine Financial Security Program:

- analyze and conclude on whether changes to the asset calculation are necessary due to overestimation of asset values in the methodology
- demonstrate that it has appropriately analyzed and concluded on the potential impacts of inappropriately extended mine life in the calculation

Implications and risks if recommendation not implemented

If there isn't an adequate program in place to ensure that financial security is provided by mine operators to fund the conservation and reclamation costs associated with their mine operations, mine sites may either not be reclaimed as intended or Albertans could be forced to pay the reclamation costs.

If incentives are not in place to reclaim lands as soon as reclamation is possible, mine sites may remain disturbed for longer than necessary and Albertans face a larger risk that they will end up having to pay the eventual reclamation costs.

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RECOMMENDATION 3: IMPROVE PROGRAM MONITORING

We recommend that the Alberta Energy Regulator, as part of its enterprise risk assessment process, develop and execute on a risk-based plan for its Mine Financial Security Program monitoring activities to ensure it is carrying out the appropriate amount of verification.

Implications and risks if recommendation not implemented

Without an effective and timely monitoring program, necessary adjustments to security amounts may not be promptly identified, which increases the risk that Albertans will end up having to pay for the conservation and reclamation of mine sites.

SYSTEMS AUDITING—FOLLOW-UP AUDITS

Environment and Parks—Systems to Manage the Specified Gas Emitters Regulation

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RECOMMENDATION 4: CLARIFY SGE REGULATION GUIDANCE DOCUMENTS—REPEATED

We recommend for a third time that the Department of Environment and Parks clarify the guidance it provides to facilities, verifiers, offset project developers and offset protocol developers, to ensure they consistently follow its requirements to achieve the Alberta government's emission reduction targets.

Implications and risks if recommendation not implemented

Without robust systems that ensure the validity of emission offsets, facilities may not be meeting their compliance obligations.

Without clear guidance, effective monitoring and consistent treatment of *SGE Regulation* participants, the government will not achieve the emission reductions it expects from this program.

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RECOMMENDATION 5: ENSURE OFFSET PROTOCOLS MEET NEW STANDARD AND IMPROVE TRANSPARENCY—REPEATED

We again recommend that the Department of Environment and Parks implement processes to ensure that all approved protocols adhere to its protocol development standard.

Implications and risks if recommendation not implemented

If protocols do not conform to the same standard, the department does not have a level playing field for assessing offset projects or assurance that the offset claims are legitimate.

Without a robust process to regularly evaluate the industry's level of adoption for practices that reduce or remove emissions, the department may be allowing facilities to claim commonly adopted activities as offsets.

Health and Alberta Health Services—Systems to Manage the Delivery of Mental Health Services

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RECOMMENDATION 6: USE ACTION PLAN AND PROGRESS REPORTING TO IMPLEMENT STRATEGY

We recommend that the Department of Health:

- use an action plan to implement the strategy for mental health and addictions
- monitor and regularly report on implementation progress

Implications and risks if recommendation not implemented

Without following a clear and measurable path toward integrated healthcare services, there is a risk that the department and AHS will expend their efforts on incremental changes and basic maintenance of the existing system without making the needed comprehensive and significant changes which have been identified.

Without an effective means to measure and analyze the results from projects associated with strategy implementation, it is difficult to determine if, and how, these efforts are actually integrating the current disjointed model of mental health and addictions care and service delivery. Regular detailed public reporting is required for transparency and accountability, and is necessary to demonstrate to Albertans what actual results are being achieved from strategy implementation and how these are improving delivery of mental health and addiction services to the public.

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RECOMMENDATION 7: INTEGRATE MENTAL HEALTH SERVICE DELIVERY AND ELIMINATE GAPS IN SERVICE

We recommend that Alberta Health Services for its own community and hospital mental health and addictions services:

- work with physicians and other non-AHS providers to advance integrated care planning and use of interdisciplinary care teams where appropriate for clients with severe and persistent mental illness who need a comprehensive level of care
- improve availability of mental health resources at hospital emergency departments
- improve its system to monitor and ensure community mental health clinics comply with AHS's expectations for treatment planning and case management
- improve its process to identify and evaluate good operational practices used by local mental health and addictions staff, and deploy the best ones across the province

Implications and risks if recommendation not implemented

Without integrated service delivery, coordinated care planning and service providers acting as one team, the healthcare system may not meet the needs of mental health and addictions patients. The needs of patients at rural emergency departments may also not be met if they cannot receive a level of support and assessment comparable to that offered in larger urban centres.

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RECOMMENDATION 8: IMPROVE INFORMATION MANAGEMENT IN MENTAL HEALTH AND ADDICTIONS

We recommend that Alberta Health Services make the best use of its current mental health and addictions information systems by:

- providing authorized healthcare workers within all AHS sites access to AHS mental health and addictions clinical information systems
- strengthening information management support for its mental health treatment outcomes measurement tools

Implications and risks if recommendation not implemented

If care providers do not have timely access to relevant health information at the point of care, they may not be able to meet the care needs of their patients and help them stay on the right care path.

Lack of effective clinical information management compromises AHS's ability to evaluate patient outcomes, assess performance of care providers, and direct resources to treatments and programs that are best for the patients.

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RECOMMENDATION 9: COMPLETE ASSESSMENT AND DEVELOP WAITLIST SYSTEM FOR ALBERTANS WHO NEED COMMUNITY HOUSING SUPPORTS

We recommend that Alberta Health Services in supporting the work of the cross-ministry housing planning team established under the mandate of the Minister of Seniors:

- complete its assessment and report on gaps between supply and demand for specialized community housing support services for mental health and addictions in the province
- develop a waitlist management system to formally assess the housing support needs of AHS's mental health hospital and community patients and coordinate their placement into specialized community spaces funded by AHS

Implications and risks if recommendation not implemented

If patients with serious mental health and addictions problems do not receive appropriate housing supports, any treatment success gained in the hospital or community will be jeopardized.

Transportation—Systems to Manage the Structural Safety of Bridges

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RECOMMENDATION 10: IMPROVE CONTRACTING FOR LEVEL 1 BRIDGE INSPECTIONS—REPEATED

We again recommend that the Department of Transportation improve its process to contract its visual inspections by documenting how it establishes criteria for assessing candidates and awards points for each criterion.

Implications and risks if recommendation not implemented

Without a rigorous, fair and transparent contract process, the department risks not obtaining the best services for the best price.

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RECOMMENDATION 11: ASSESS WHETHER TO CONTRACT OUT PROGRAM DELIVERY—REPEATED

We again recommend that the Department of Transportation regularly assess whether it should contract out inspections or do them itself.

Implications and risks if recommendation not implemented

Without a regular assessment of the costs and benefits of contracting out bridge inspections, the department does not know if it is getting value for the money it spends on these services.

Stand-alone Systems Auditing—New Audits

REPORT OF THE AUDITOR GENERAL OF ALBERTA

July 2015

Environment and Parks—Systems to Manage Grazing Leases

SUMMARY

Approximately 60 per cent of Alberta's land is owned by the Crown on behalf of Albertans. The various surface uses of this public land fall under the administration of the Department of Environment and Parks through the *Public Lands Act*. The department oversees some 5,700 grazing leases on more than five million acres of public land. The province receives about $4 million annually from these leases.

Grazing leases are intended for leaseholders to graze livestock[1] on public land. Albertans benefit by having leaseholders who help ensure long-term sustainability of the land and protect animals and plants at risk where needed.

The *Public Lands Act* allows the department to let some Albertans use public land in this way. However, as a general principle, no Albertan should derive personal benefits from Alberta public assets beyond uses the assets are intended to provide.

What we examined

We examined the department's systems to:

- identify objectives for and benefits expected from grazing leases on public land
- ensure all Albertans benefit from its management of grazing leases
- analyze and report on whether grazing leases are meeting objectives or what is needed to improve how the department manages leases

Overall conclusion

The department's processes ensure that, overall, public land in Alberta used for grazing is in good health. However, the department cannot demonstrate that the grazing lease program is meeting defined objectives. Further, current legislation allows an unquantified amount of personal financial benefit to some leaseholders over and above the benefits of grazing livestock on public land.

What we found

Some leaseholders receive significant compensation for allowing operators[2] onto leased public land, or from selling or transferring their lease to another leaseholder. In some cases the amount of surface compensation paid to leaseholders as required under the *Surface Rights Act* is many times the amount of the rent they pay on a grazing lease. We were told by the department that the *Surface Rights Act* provides for compensation, which is intended to offset the costs of damage and disruptions to the leaseholder's grazing operations.

The department told us it does not have the regulatory or legal authority to collect information on surface access compensation. Therefore, the department had no way to confirm whether the fees paid to leaseholders simply cover the costs as intended or are greater than the actual costs incurred, providing a personal financial benefit for the leaseholder.

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1 Usually cattle are grazed but livestock can also include horses, sheep and sometimes bison.

2 "Operators" means companies, exploring for or exploiting natural resources, or using the land for pipeline, electricity line or similar types of access.

We found unproclaimed legislation, Bill 31, from 1999 that would have allowed the province to collect a portion of the surface access compensation fees from industry operators that are currently paid to leaseholders.

The department requires leaseholders to keep the land under lease in good health and to keep other requirements such as fencing, record keeping, and taxes in good shape and up to date. Other than these requirements, the department has not clearly identified, defined and communicated its objectives for grazing leases, set relevant performance metrics associated to those objectives, or collected the information necessary to analyze and ensure grazing leases provide expected benefits to all Albertans.

What needs to be done

The department needs to:

- identify the information necessary to decide if grazing livestock is the best use of public land as required by the *Public Lands Act*
- define its environmental, social and economic goals and objectives for grazing leases
- define relevant performance measures and use them to assess whether grazing leases achieve the expected objectives and benefits

Why this is important to Albertans

Public land is set aside for the benefit of all Albertans, who rely on the department to make sure they benefit from the various uses of public land. To protect these benefits and the land itself, the department must consider the needs of everyone who has an interest in how the land is used and then set clear objectives for uses such as grazing cattle or other livestock.

AUDIT OBJECTIVE AND SCOPE

The objective of our audit was to determine whether the department has adequate systems to:

- define and communicate its objectives for offering grazing leases on public land
- ensure grazing leases provide the best mix of benefits to current and future Albertans
- develop an effective results management framework[3] to make sure it is meeting its objectives for grazing leases
- report on the achievement of grazing lease objectives

Timing of audit work and extent of auditor responsibilities

We conducted our field work between December 2014 and March 2015. We substantially completed our audit on June 5, 2015. Our audit was conducted in accordance with the *Auditor General Act* and the standards for assurance engagements set by the Chartered Professional Accountants of Canada.

[3] In our *Report of the Auditor General of Alberta—July 2014* we recommended that the government improve its results analysis by using an effective results management framework.

BACKGROUND

About 60 per cent—100 million acres—of Alberta is held as public land that Albertans have entrusted to the department to manage on their behalf. The department has issued over 5,700 leases to graze cattle and other livestock on public land. These leases cover over five million acres, in 14 of the 21 natural sub-regions[4] in the province. The leases range from a few acres to many thousands of acres and are held by individual ranchers, grazing associations or co-operatives, and corporations.

Grazing leases have been a part of Alberta since the late 1800s—before Alberta became a province. Initially, grazing leases were a way to allocate public land for use by settlers and ranchers. Over the years, the rationale for grazing leases has changed from land allocation to goals such as supporting agriculture in Alberta, provision of ecological goods and services to all Albertans and ensuring that Albertans use public land in an environmentally sustainable way.

About 300,000 head of privately owned cattle are grazed on these leases each year. The department's agrologists determine the number of animals each lease can support. Leaseholders pay rent to the province based on the number of Animal Unit Months (AUMs)[5] that are appropriate for each lease. The formula to set rental rates was developed in the 1960s and the rental rates per AUM have been frozen since 1994. Grazing leases support about 1.3 million AUMs annually.

The department administers an additional million acres of public land for grazing livestock under programs such as grazing reserves, grazing allotments and grazing permits. Because different regulations apply to those programs, we excluded them from this audit. Given the similarity in these uses of public lands, our audit findings and recommendations would likely be useful for grazing reserves, allotments and permits.

Balancing stakeholders' changing needs and often conflicting views on how public land should be used is difficult. The various stakeholders involved in grazing leases include:

- current and future Albertans
- First Nations
- government
- leaseholders (individual ranchers, lease associations and corporations)
- oil and gas and other companies involved in resource extraction and use
- hunters
- recreational users
- environmental groups

Grazing leases generate revenue to the province through annual rental fees and lease transfer or assignment fees.[6] In 2013–2014 the province collected $3.8 million dollars from grazing leases. Industrial operators also pay an industrial site rental fee to the province and surface access compensation to leaseholders when those sites overlap onto leased land.

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[4] There are six natural regions in Alberta; Rocky Mountain, foothills, grassland, parkland, Boreal forest and Canadian shield. There are 21 subdivisions of these regions generally characterized by vegetation, climate, elevation, and latitudinal or physiographic differences within a given region.

[5] An Animal Unit Month is the amount of forage required each month by one mature cow weighing approximately 1,000 pounds that is either dry (not nursing) or has a calf up to six months old. For example a lease with 100 AUMs can support 20 mature cows with calves less than six months old for five months, or about 13 cattle weighing about 1500 lbs. for five months.

[6] Transfer or assignment fees are collected by the department from leaseholders when a new or different leaseholder is added to the grazing lease title. The department is planning to change and standardize transfer fees.

FINDINGS AND RECOMMENDATIONS

Personal financial benefits derived from public assets

Background

Leaseholders are required to steward the land for long-term sustainability. Rent leaseholders pay to the province is much lower than rent on private land, but leaseholders incur costs such as fencing and water development and payment of municipal taxes that may cause their costs to be similar to owners of deeded land. Both leaseholders and Albertans benefit from the use of public land to graze livestock. Leaseholders benefit through their use of the land and Albertans benefit through the leaseholders' stewardship of public lands.

In 1999, after significant consulting with stakeholders throughout Alberta, the government introduced changes to the laws governing grazing leases. Bill 31 was passed in 1999 but never proclaimed into law. It would have made Alberta's management of grazing leases closer to that in Saskatchewan and British Columbia. Bill 31 would have allowed the department to:

- remove from the grazing leases the area of land that industry operators need for access to sub-surface resources, and proportionally reduce the leaseholders' rent
- receive, as government revenue, the surface access compensation fees that industry operators pay to leaseholders
- ensure that operators still pay leaseholders for the actual cost of industrial activity on the leased land

FINANCIAL BENEFITS FROM GRAZING LEASES

We have not made a recommendation to the Department of Environment and Parks. The department does not have the ability to implement a recommendation to change their systems to identify or collect revenue generated by grazing leases without changes to legislation.

Criteria: the standards for our audit

The Department of Environment and Parks should have effective systems to identify leaseholders who receive revenue from oil and gas exploration and extraction or the sale of their leases and ensure leaseholders are not deriving personal benefits from Alberta public assets beyond uses the assets are intended to provide.

Our audit findings

KEY FINDINGS

- Certain leaseholders receive surface access compensation fees in excess of the actual rent they pay to the province for grazing livestock on public land and the costs incurred from allowing industrial access to their leased land.
- The department does not know:
  - how many grazing leases have oil, gas or other industrial sites on them
  - the amount of money leaseholders receive in surface access fees
  - the value of leases when they are sold or transferred
- The province charges less rent for grazing leases than private landowners charge.

Department does not keep track of how many leases provide industry access

The department told us it is possible that up to half of the grazing leases in Alberta have oil, gas or other industrial sites. But it had no regulatory or legal authority to confirm that estimate.

Leaseholders are entitled to compensation for disruptions or damage from industrial operators in the form of surface access fees. Although the land belongs to all Albertans, the *Surface Rights Act* requires industry operators to pay leaseholders for surface access to their grazing leases. This payment is intended to compensate leaseholders for damage to the land or structures on the lease, or to pay for disruptions to the leaseholder's ability to graze livestock.

With the department's help we identified 63 grazing associations that held 85 grazing leases on over 700,000 acres. We were able to obtain publicly available information on 54 of these associations and the 72 leases they hold for just over 600,000 acres. This accounts for about 10 per cent of the approximately six million acres of public land that is used for grazing leases in Alberta. From the information we were able to obtain we found that 40 of the 54 grazing associations reported receiving surface access fees. Together they received about $3 million from industry operators.

By our estimates, the 54 leases covered about 10 per cent of the total acres of grazing leases on public land. They received about $2.7 million more in access compensation fees than the $326,000 they paid in lease rents to the province. If those amounts were consistent throughout the province, Albertans would be forgoing over $25 million in access fees currently paid to leaseholders. A precise figure is not available as the department is presently unable to collect all the information necessary to determine the amounts received by leaseholders.

In 2013 one of the largest of the 54 grazing associations paid the province $68,875 in rent for its multiple leases and collected $348,068 in payments from industry operators for activity on its leased land.

The department does not track private transactions or lease transfers to know what grazing leases are worth

The *Surface Rights Act* requires industry operators to pay leaseholders directly for surface access to grazing leases. As these are considered private transactions the department does not have regulatory authority to keep track of:

- how many leaseholders receive surface access compensation from operators
- how much money leaseholders receive from surface access fees
- the value of a lease when leaseholders sell or transfer it to someone else

In our audit we found that leaseholders can use grazing leases to obtain a mortgage or as collateral on loans. We also found that leaseholders can sell or transfer a lease and they keep the entire amount for which the lease is sold. By law, mortgages and the sale of grazing leases are private matters; it is, therefore, difficult to find information on the exact value of owning a lease.

The price of a grazing lease varies significantly throughout the province because of variables such as location, size and grazing AUMs. In one example we found two grazing leases on public land that were listed for sale together in southwest Alberta. The leases had a total of 1,134 acres and 166 AUMs. The yearly rent paid to the province for both leases was $486. The two grazing leases, including the rights to graze cattle on them, which must be renewed in 2018, were being sold for $265,000. The current leaseholder will keep the total amount for which the leases are sold.

Private land rental rates are higher than government rental rates

It is difficult to accurately compare rental rates on leased public land to rates private landowners charge. Leaseholders on public land are liable for all capital investments such as fencing, upkeep of the land (e.g., controlling noxious weeds) and paying taxes on the value of the land. It is unclear whether these costs fully reflect the difference in rental rates. Leaseholders also cannot develop the land and must provide reasonable recreational access.

Private landowners can develop the land and can deny recreational access to their land. When private land is leased the landowner is responsible for capital investment, upkeep of the land and ensuring taxes are paid. The renter just pays for the privilege of grazing cattle for a specified period.

A survey by the Department of Agriculture in 2012 showed that privately owned land in Alberta rented for $20.00 to $30.50 per AUM.[7] This is more than 10 times the $1.39 to $2.79 per AUM the department currently charges for grazing leases throughout Alberta (see appendix), and the average of $2.19 per AUM that the 54 grazing associations paid. The department does not track or take the market value of private land rental into consideration for setting rental fees.

Implications and risks

There is a risk of leaseholders deriving personal financial benefits from Alberta public assets beyond those the assets are intended to provide.

Lack of objectives

Background

Historically, the government used grazing leases as a way to allocate land and to support agriculture and settlement. The role of grazing leases and Albertans' expectations for them are changing. Grazing leases are now a tool to help ensure the long-term sustainability of public land and protect native plant and animal species.

It is always good practice to set clear goals and objectives for programs. Defined goals help program managers identify how best to help the program meet its objectives and provide the expected benefits. Clear objectives also help set performance measures to help analyze results and identify areas for improvement.

RECOMMENDATION 1: CLARIFY OBJECTIVES, BENEFITS AND RELEVANT PERFORMANCE MEASURES

We recommend that the Department of Environment and Parks define and communicate the environmental, social and economic objectives it expects grazing leases should provide all Albertans, as well as relevant performance measures to monitor and ensure those objectives are met.

Criteria: the standards for our audit

The Department of Environment and Parks should have effective systems to:

- clearly define objectives and priorities for managing leases and providing Albertans with the expected benefits of grazing leases
- collect the information it needs to make decisions on the objectives and benefits
- report on whether grazing leases are achieving the goals and objectives and providing the expected benefits to Albertans

[7] Alberta Agriculture and Rural Development, Custom Rates 2013 - Land Leasing. (first posted November 28, 2012) http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/inf14267

Our audit findings

KEY FINDINGS

The department does not have:

- defined environmental, social and economic objectives for grazing leases
- relevant performance measures and processes to assess and report whether grazing leases achieve expected objectives

Lack of defined objectives for and benefits from grazing leases

Through regional land use frameworks, the Government of Alberta identified some high-level objectives for private and public lands in Alberta. We reviewed the two regional land use plans completed in 2014.

Our review of the Lower Athabasca and South Saskatchewan regional plans found high-level references to grazing leases as a tool for meeting land use objectives. However, the plans did not state what those objectives are and did not provide details on how grazing leases support the government's objectives for its land use plans.

The department's Grazing Lease Code of Practice defines best practices for the use and health of grazing leases and provides high-level comments for the support of agriculture and allowing recreational access. However, the code itself is not mandatory.

We were able to identify the department's objectives for rangeland health of leased land. As each lease is different in size, location, area or topography, the department gives its agrologists the authority to use their professional knowledge and judgement to decide on the exact requirements for each lease to be in good health. The department also has processes to regularly assess and report on the health of the leased land, usually in the two years before the lease renewal date.

The department has not documented its economic objectives for grazing leases, such as stating what revenue it expects from grazing leases. The department was also unable to tell us if grazing leases generate or should generate revenue for the province above the costs to manage the leases or for other initiatives associated to public land.

We confirmed that, other than requiring leaseholders to keep their leases in good health, pay rental fees and taxes, and allow recreational access, the department has not defined any other objectives for grazing leases.

Throughout our audit the department used the term "optimum mix of benefits" from grazing leases to include ideas such as protecting rangeland, native grasslands and species at risk; providing access for recreational use; supporting agriculture and ranchers; or improving environmental sustainability of public land. However, the department has not documented these concepts, defined the benefits it expects grazing leases to provide or assigned a priority to each expected benefit.

Performance measures are lacking

We confirmed that the department does not currently have any formally defined performance measures. The department did not meet its previous performance measure, to have 90 per cent of all grazing leases in good standing—for 2007–2008 through 2011–2012.

In its 2014 annual report the department stated it would report only on those performance measures that best reflected the integration of the newly formed Ministry of Environment and Sustainable

Resource Development, now the Ministry of Environment and Parks. As a result, some performance measures, including rangeland sustainability, were no longer reported in the annual report.[8]

The department told us they are currently developing new internal performance measures for grazing leases and systems to monitor and assess the achievement of those measures. However, these were not ready to review and assess before we completed our audit field work in March 2015.

Implications and risks if recommendation not implemented

Without clearly defined objectives and relevant performance measures for grazing leases on public land in Alberta, the department cannot ensure those objectives are being met, or that Albertans are receiving the benefits they should.

Further, without relevant performance measures and effective systems to monitor and analyze them, the department cannot know what it must do to improve its processes to better manage grazing leases on behalf of Albertans.

[8] Environment and Sustainable Resource Development (2014). Annual Report 2013–2014. Alberta: Government of Alberta.

Appendix

ALBERTA RENTAL RATES AND RENT SASKATCHEWAN COLLECTS FROM GRAZING LEASES

Lease rental rates

We confirmed the department developed and is implementing a new system and formula[9] to set rental rates for grazing leases. It is difficult to develop a system and rental rate formulas for all 5,700 leases across Alberta. The department is currently using a system and formula for setting rentals developed in the 1960s; rental rates have been frozen since 1994.

The current formula is:

$$\text{Rent per AUM} = \frac{\text{(300 lb. wt. gain/AU/yr) x (average lvstk. \$/lb) x (zonal \%)}}{\text{12 months}}$$

ZONES	ZONAL % FOR FORMULA	RENTAL RATE PER AUM	RATE PER AUM IN 2014 IF RATE WAS NOT FROZEN IN 1994	DIFFERENCE RECEIVED IF RATE NOT FROZEN
Zone—A	10%	$2.79	$3.32	$0.53
Zone—B	8.33%	$2.32	$2.76	$0.44
Zone—C	5%	$1.39	$1.66	$0.27

The department spent considerable effort to work with grazing lease stakeholders to develop a new system and rental rate formula. However, the new system and formula cannot be used until they are introduced and debated in the legislature and then included in the *Public Lands Act*.

The new system and formula for annual grazing lease rental rates were developed by the department with the help of external expertise. The department also consulted with four grazing lease industry groups: Alberta Beef Producers, Alberta Grazing Lease Holders Association, Western Stock Growers and the Northern Alberta Stock Grazing Association.

Similar to the current rental rate formula, the new formula is based on the number of Animal Units per Month (AUM) that a lease can support. The new system and rental rates were developed so that there is a minimum annual rent and then a variable "sliding or dynamic rate" that increases as cattle prices rise. The variable rate would be set on the selling price of cattle in September of the year before. This means the province obtains a set minimum rent and receives additional rent when cattle prices are high and leaseholders make more profit from public lands.

We confirmed the proposed new grazing lease rental rate system considers costs that leaseholders must incur. The costs were evaluated and defined in a cost survey from 2005 and there is a process underway to update the cost survey.

[9] Grazing Lease Royalties—Alberta's Grazing Lease Framework. Background, proposed changes, rational and implementation. Department of Environment and Sustainable Resource Development, February 18, 2015.

Saskatchewan grazing leases

Saskatchewan obtains more revenue than Alberta does from grazing leases on public land. From information we obtained from the Saskatchewan Department of Agriculture's website, about 6.2 million acres is grazing and forage land. Although this is a similar area to Alberta's grazing leases, we were unable to break out or directly compare the number of Saskatchewan's grazing leases, or other types of leases to similar ones in Alberta. However, Saskatchewan collected $9.7 million in rent from grazing leases in 2014–2015. Alberta collected $3.8 million in 2013–2014.

Saskatchewan also collected another $11.5 million in surface lease rentals paid to the Crown by oil and gas companies operating on leaseholds based on Schedule 6 of Saskatchewan's *Provincial Land Regulations*.

We realize that we cannot directly compare the revenue Alberta and Saskatchewan receive from leases on public land. However, from each province's financial statements, we can confirm Saskatchewan collects over $20 million compared to Alberta's $4 million.

Environment and Parks and the Alberta Energy Regulator—Systems to Ensure Sufficient Financial Security for Land Disturbances from Mining

SUMMARY

What we examined

We followed up our recommendation, originally made to the former Department of Environment in 1999, to implement a system for obtaining sufficient financial security to ensure that the conservation and reclamation of mine sites is completed. We have repeated the recommendation three times.

Since the time of our last follow-up audit, the Department of Environment and Parks developed and implemented the Mine Financial Security Program (MFSP). The focus of our current audit was on this program, and whether it constitutes an approach that provides for sufficient financial security. Our audit approach included assessing whether the methodology is logical and in agreement with the stated objectives of the MFSP and whether adequate ongoing monitoring of the security being provided is taking place. The design of the MFSP resides with the department and the administration was transferred to the Alberta Energy Regulator, effective March 2014. Therefore, our audit was conducted at both organizations.

As of December 31, 2014, $1.57 billion of security is currently being held in comparison to estimated reclamation liabilities of $20.8 billion. Because the MFSP applies an "asset to liability approach," both the security held and the value of the resource in the ground are considered assets in the program, which is designed to offset liabilities. As the resources are depleted, the security requirements increase to reflect greater liability exposure. The security required is reduced as reclamation takes place and the liability is reduced.

Overall conclusion

Implementing the MFSP was an important step towards a system that obtains sufficient financial security for mining related land disturbances. However, for the design and operation of the MFSP to fully reflect the intended objectives of the program, improvements are needed to both how security is calculated and how security amounts are monitored.

What we found

There is a significant risk that asset values calculated by the department are overstated within the MFSP asset calculation, which could result in security amounts inconsistent with the MFSP objectives. The MFSP asset calculations do not incorporate a discount factor to reflect risk, use a forward price factor that underestimates the impact of future price declines, and treat proven and probable reserves as equally valuable.

The extent of the department's and AER's audit verification activity since 2011 has been limited. There is no documented risk-based plan to outline the extent of activities necessary to provide the necessary assurance that security amounts are appropriate.

What needs to be done

We are assessing the recommendation as implemented because the deployment of the MFSP satisfies the intent of what was originally recommended. However, we are making a new recommendation as the department needs to analyze and decide upon the various factors overstating asset values in the MFSP calculation. Additionally, the department should consider the impact of factors that may inappropriately extend the mine life within MFSP security calculations.

We are also making a new recommendation to the AER as the administrator of the MFSP. The AER needs to develop a plan, informed by external and operator risks, to decide when and how many audits of operator submitted information it will complete. Additionally, the AER could cost-effectively enhance its monitoring activities by keeping a closer eye on current events that may signal risks to the operating and financial condition of mining operators.

Why this is important to Albertans

In the event that a mine operator cannot fulfill its reclamation obligations, and no other private operator assumes the liability, the province may have to pay a potentially substantial cost for this work to be completed. Thus, a robust and responsive system to calculate and collect security from mine operators is essential.

AUDIT OBJECTIVE AND SCOPE

Our audit objective was to determine if the department and the AER implemented our recommendation to implement a system for obtaining sufficient financial security to ensure that conservation and reclamation of mine sites is completed.

We conducted our field work from October 2014 to March 2015. We substantially completed our audit on June 11, 2015. Our audit was conducted in accordance with the *Auditor General Act* and the standards for assurance engagements set by the Chartered Professional Accountants of Canada.

BACKGROUND

By law, coal and oil sands mine operations are responsible for reclaiming land that is disturbed by mining and the operation of related plants. Standards for reclamation are set by the Government of Alberta.

Audit history

In 1998, we performed an audit of the systems used by the Department of Environment to collect financial security for land disturbances in the oil sands and coal mining sectors. We determined that financial security was usually in the form of a letter of credit from a bank, intended to cover the costs related to eventual site reclamation by industry operators. However, we found that the department did not have a consistent process to determine the amount of financial security required from the operators

and there were varying practices being followed by different operators and industries. Our original recommendation was reported in our 1998–1999 report, and we repeated the recommendation in our follow-up reports in 2000–2001, 2004–2005 and 2009.

Developments since our 2009 follow-up audit

The government has moved forward with a number of reclamation initiatives to improve clarity, security, and environmental performance within the oil sands and coal mining sectors. These new reclamation initiatives include the MFSP, enhanced reclamation reporting, and a strategy to encourage quicker reclamation.

The Mine Financial Security Program

The fundamental principle of the MFSP is that the *Environmental Protection and Enhancement Act* approval holder is responsible for carrying out suspension, abandonment, remediation and surface reclamation (going forward, referred to as reclamation in this report) work to the standards established by the province and to maintain care and custody of the land until a reclamation certificate has been issued.

The MFSP was initiated by the department in 2011 to ensure that financial resources will be available to reclaim disturbed lands if an operator is unable to complete the reclamation. The MFSP intends to strike a balance between protecting Albertans from incurring costs associated with reclamation work and maximizing opportunities for responsible and sustainable resource development. The amount of security and when it needs to be provided are key elements that factor into that balance.

By June 30, mine operators are required to provide annual reporting for the previous year ended December 31. This annual reporting includes the information necessary to calculate the required security deposit. Responsibility for the administration of the program was transferred from the department to the AER in March 2014. The department continues to be responsible for establishing the overall MFSP policy and design.

The program requires a base amount of security for each mine project, which is intended to provide the funds necessary to safely secure the mine site and place the project in a care and custody state.

The MFSP uses an asset-to-liability approach to managing financial risks relating to reclamation liabilities. This approach recognizes that the resource value associated with an approved project is an asset in terms of its ability to generate cash flow through operations. When a project has MFSP assets at least three times larger than its MFSP liability, is 15 years or more from the end of its reserves and is keeping current with its reclamation plans, additional security above the base amount is not required. When a project has MFSP assets less than three times its MFSP liability, is nearing the end of its productive mine life, or is not meeting its targeted reclamation plans, additional financial security is required. (See appendix for base and other types of security deposits.)

Because the MFSP has been designed using an asset-to-liability approach rather than a full security approach, Albertans bear a degree of risk that reclamation will not be completed by the mine operator. The MFSP attempts to manage this risk by requiring these various deposits.

The MFSP is not designed to respond quickly to sudden fluctuations in the price of oil. This was a deliberate decision made by the department to avoid potentially widely fluctuating security amounts from year to year. If an abrupt financial and operational decline were to occur in the oil sands sector it would likely be difficult for an oil sands mine operator to provide this security even if the need for the

security was identified through the program. It is important to recognize that the department has accepted the risk of not protecting against a broad based and rapid structural decline in the oil sands sector, having designed the program with the intent of capturing what they believe are a reasonable range of economic conditions.

FINDINGS AND RECOMMENDATIONS

Improvements needed to the design of the mine financial security program

Background

Asset safety factor deposit

The MFSP incorporates an asset safety factor deposit which is only required if a mine's resource assets are worth less than three times the total anticipated costs for conserving and reclaiming the mine site. The asset safety factor calculation was created to ensure that a mine will have assets of sufficient value in place to ensure that a new operator will be motivated to take over the mine and complete the required reclamation activities if the existing operator is not able to do so.

Under the MFSP, the value of an oil sands mine's resource assets is based on the income that those assets are likely to generate over the life of the mine. The assets are calculated as:

MFSP Assets = N * R * F

Where N = 3-Year Average of Annual Netbacks[1]
R = Gross Proven and Probable Reserves
F = Forward Price[2] Factor

Outstanding reclamation deposit

The outstanding reclamation deposit is intended to encourage the prompt reclamation of disturbed lands. The operator posts security when they do not complete planned reclamation according to the reclamation schedule approved by the department within the operator's mine reclamation plan. The amount of security is $75,000 per hectare of work planned but not performed.

Operating life deposit

An operator is required to start posting financial security when there are less than 15 years of reserves left. Security gradually increases so that all outstanding reclamation costs are fully financially secured by the time there are less than six years of reserves left.

Presently, no oil sands mining operator has posted more than the base amount of security. In other words, no security is currently required under the various other forms of deposit based on data submitted by oil sands mine operators.

[1] Netback is a term used in oil and gas extraction that is calculated by taking revenue from oil and gas production and deducting all the costs associated with bringing oil and gas to market. It is typically presented on a "per barrel" basis.

[2] A forward price is the predetermined delivery price for an underlying commodity, currency, or financial asset decided upon by the buyer and the seller to be paid at a predetermined date in the future.

RECOMMENDATION 2: IMPROVE PROGRAM DESIGN

We recommend that the Department of Environment and Parks, as part of its regular review of the Mine Financial Security Program:

- analyze and conclude on whether changes to the asset calculation are necessary due to overestimation of asset values in the methodology
- demonstrate that it has appropriately analyzed and concluded on the potential impacts of inappropriately extended mine life in the calculation

Criteria: the standards for our audit

The department should demonstrate that the Mine Financial Security Program:

- is designed consistently with its principles
- is operating as intended
- mitigates the risk of taxpayers having to assume costs of reclamation work in case of operators' possible non-compliance with legislation

Our audit findings

KEY FINDINGS

- The MFSP asset calculation overstates the economic value of mining assets.
- The department needs to review and resolve opportunities it identified within the MFSP to inappropriately extend an oil sands mine's life.
- The department reviews and approves planned yearly reclamations.

Asset calculation methodology results in overstated estimated asset values

We have identified three significant inconsistencies between the MFSP objectives and the approach to the asset calculation that is likely to result in overvaluation of mine assets:

- The reserve estimate used under the program includes both proven and probable reserves. Probable reserves, defined as a 50 per cent likelihood of commercial extraction, are less likely to be productive than proven reserves, defined as a 90 per cent likelihood of commercial extraction. Treating both proven and probable reserves as equally valuable on a per barrel basis increases the risk that the department is overestimating the value of these assets. Furthermore, there is no consideration in the calculation of the development costs necessary to bring undeveloped proven reserves and probable reserves into production.
- The resource asset valuation calculation applies a forward price factor to the average netback for the last three years. This methodology is intended to adjust past earnings to reflect expected future declines in oil prices. Using this approach implies that commodity price declines will have an equally proportional impact on revenues as they do on operating costs, which is not consistent with the reality of oil sands operations. Applying the forward price factor to the average netback instead of applying it only to average revenues and then deducting average operating expenses underestimates the impact of future price declines on the valuation of a mine's resource assets.
- The resource asset valuation calculation does not reflect any risks associated with the future economic value of the reserves. Oil sands mines are long-term operations and it takes many years to completely extract a site's reserves. Over that long time frame, there are numerous risks to the profitability of a mine operation. These include oil price fluctuations, foreign exchange rate changes, technological change and regulatory change. These risks are typically reflected by applying a discount rate to the expected future income stream when valuing a long-term asset. No discount rate, or risk-based adjustment, is applied in determining the asset value under the program, which overstates the value of a mine's resource assets.

While correcting for these overstatements may not immediately result in any change to the security required, it could result in additional required security earlier than presently anticipated or in the event of prolonged oil price weakness.

Possible inappropriate extension of mine life

The department has identified two circumstances that could result in unnecessary deferrals in the collection of security under the program:

- Some oil sands mine operators are using in situ techniques to extract oil reserves and augment their open pit mine reserves. These in situ techniques involve the drilling of wells and the injection of heat into the reservoir to extract bitumen as opposed to extracting it through open pit mining. This technique creates less land disturbance than does an open pit mine. However, the inclusion of the oil reserves made available through this process in the calculations under the program serves to increase the mine's resource assets and extend the life of the mine. This delays the collection of security for the open pit mining operation as it reaches the end of its life.
- Oil sands mine operators may be able to amend the areas covered by their mine approvals or combine multiple mines into one approval. The effect of this may combine an old mine operation with a new one and thus increase the resource assets associated with the approval. This delays the collection of security for the older mining operation as it reaches the end of its life.

We understand that the department is currently analyzing the first of these issues as part of its MFSP review process. The second issue will not be part of the MFSP review process.

Planned yearly reclamation is being reviewed and approved

One of the stated principles that guided the development of the MFSP is that "lands available for reclamation should be reclaimed and returned to the province or landowner as soon as possible."

If operators do not complete their planned yearly reclamation, any shortfall translates into higher security at a rate of $75,000 per hectare. Operator mine reclamation plans are reviewed and approved by the department, and now by the AER, and we were provided evidence of detailed technical questions and challenges to operators' mine reclamation plans. This review is completed outside the context of the MFSP as it has broader implications to other areas within the department. Within this review, we found evidence that the yearly reclamation planned had been assessed for adequacy. This assessment is important as the amount of security posted is impacted if planned reclamation is not completed.

The review of planned reclamation is a key control for the MFSP. The more optimistic an operator's yearly reclamation forecast is, the more likely an operator will have to post security; thus, there is a potential disincentive for operator's to plan to reclaim more disturbances earlier.

Implications and risks if recommendation not implemented

If there isn't an adequate program in place to ensure that financial security is provided by mine operators to fund the conservation and reclamation costs associated with their mine operations, mine sites may either not be reclaimed as intended or Albertans could be forced to pay the reclamation costs.

If incentives are not in place to reclaim lands as soon as reclamation is possible, mine sites may remain disturbed for longer than necessary and Albertans face a larger risk that they will end up having to pay the eventual reclamation costs.

Monitoring of the security provided can be improved

Background

The AER assumed responsibility for monitoring the program in March 2014. The program was previously monitored by the department.

Under the program, operators are required to file a brief annual report that discloses their conservation and reclamation liability, their resource assets and the components of the resource asset calculation, and the amounts required for each security deposit under the program. This report is certified by the operator's chief executive officer or chief financial officer. No supporting documentation is required with the report.

The AER is able to "audit" the information provided in the annual report and there are four levels of audit under the program.

- Level 1 audit—Phone or in-person discussions with the operator seeking clarification of information in the annual report.
- Level 2 audit—Written questions and responses confirming scope and methodology used in preparing the annual report.
- Level 3 audit—Detailed audits performed by AER staff, with possible involvement of the Department of Environment and Parks or Department of Energy staff, on all or a portion of the data and assumptions in the annual report. These audits are typically performed at the operator's offices.
- Level 4 audit—Detailed audits performed by a third party auditor. These audits are typically performed at the operator's offices.

The MFSP guidance document indicates that audits may be conducted; however, it doesn't prescribe the number and type of audits to be completed.

RECOMMENDATION 3: IMPROVE PROGRAM MONITORING

We recommend that the Alberta Energy Regulator, as part of its enterprise risk assessment process, develop and execute on a risk-based plan for its Mine Financial Security Program monitoring activities to ensure it is carrying out the appropriate amount of verification.

Criteria: the standards for our audit

Environment and Parks and the Alberta Energy Regulator should demonstrate that the Mine Financial Security Program is implemented, is being followed and is being monitored adequately.

Our audit findings

KEY FINDINGS

- A risk-based plan has not been developed to direct the nature and extent of monitoring activity.
- The level of audit verification is not sufficient to mitigate risk.
- Monitoring activities to mitigate risk could be enhanced.

Risk-based plan has not been developed

When the MFSP was initiated, the department intended to complete two level 4 audits per year, one in the coal sector and one in the oil sands sector. The department was responsible for conducting audits of submissions prior to AER taking over the monitoring of the program.

The AER has not established an audit plan that identifies the level 3 and level 4 audits that should be completed over a given timeframe. A risk assessment has been recently developed to help identify which operators should be monitored more closely. However, there presently is no evidence that the level of audit activity is commensurate with the risks that exist.

Insufficient level of audit verification

The previous program for collecting security for the reclamation of mine operations required operators to provide detailed support for the calculations used to support the amount of security provided. When the MFSP was developed by the department, this requirement was removed. The MFSP only requires a certified annual report and allows for the AER to request additional information to review, or conduct more detailed audits of the calculations. The self-reporting nature of the MFSP enhances the importance of the level 3 and level 4 audits, which verify the information being submitted by operators.

There are 19 coal mines that provide financial security under the program. Since the inception of the program, only two of these mines have been subject to level 3 audits. One level 4 audit had begun at the time of our audit. There is a high degree of financial risk associated with coal mine operations due to the decline in coal prices. As a result, the entire coal sector elected to provide full financial security for the reclamation of their mines. However, very little audit activity has been undertaken in the coal sector to ensure that the amount of financial security provided by the operators is adequate.

Since the program was implemented in 2011, only two level 4 audits have been completed in the oil sands sector and three level 3 audits have been completed.

Given that $1.57 billion of financial security was provided under the program in 2014 and a significantly greater liability exists in relation to unsecured reclamation costs for existing mine operations, the level of verification activity has been insufficient.

AUDITS COMPLETED

	LEVEL 3		LEVEL 4	
	Oil Sands	Coal	Oil Sands	Coal
2012	1	1	0	0
2013	2	1	1	0
2014	0	0	1	1

Note: There are 8 oil sands mines and 19 coal mines

Since 2011, the department and the AER have completed a total of 32 level 2 audits, which entails requesting additional information based on areas of risk or potential concern with an annual submission. The level 2 audit is an important part of the monitoring process as it can identify potential issues. However, they don't involve verifying supporting information from company records. As such, they provide less assurance on the accuracy of amounts used to calculate security.

Monitoring activities to mitigate risk could be enhanced

The MFSP is designed for an annual review, driven by an annual report that mine operators are required to submit due at the end of June following the reporting year ended December 31. However, significant changes in the intervening period can erode an operator's financial situation. The AER presently does not have a process to monitor information that might identify material changes to an operator's continuing operations and financial condition. For example, keeping apprised of significant corporate press releases, interim financial statements and share prices.

The AER does receive information from its field staff that have a more direct line of sight to the operators. This information may alert the AER to changing circumstances that may warrant further review in the context of the MFSP.

Implications and risks if recommendation not implemented

Without an effective and timely monitoring program, necessary adjustments to security amounts may not be promptly identified, which increases the risk that Albertans will end up having to pay for the conservation and reclamation of mine sites.

Appendix

TYPES OF FINANCIAL SECURITY DEPOSITS UNDER THE MINE FINANCIAL SECURITY PROGRAM

The Mine Financial Security Program includes four types of financial security deposits, focusing on various potential risks during the lifecycle of a mine:

Base Security Deposit—Existing and new projects are required to provide a base amount of security. Among other things, this security will be used for suspension care and custody to maintain security and safety at the site until a new operator takes over or the site is closed. For existing projects, the base security deposit will be the amount of security each project had posted with the government effective December 31, 2010. For existing projects, the security amount as of December 31, 2010 that is being held is:

APPROVAL HOLDER, PROJECT NAME AND EPEA APPROVAL NUMBER	BASE SECURITY DEPOSIT
Canadian Natural, Horizon, 149968	$61,200,000.00
Imperial, Kearl, 46586	$64,655,000.00
Shell Albian, Jackpine, 153125	$72,361,895.00
Shell Albian, Muskeg River, 20809	$111,277,441.29
Suncor, Base Mine, 94	$359,096,654.00
Suncor, Fort Hills, 151469	$38,958,605.00
Syncrude, Mildred Lake and Aurora North, 26	$205,303,024.00

For new projects, the base security will be:

MINE TYPE	BASE SECURITY DEPOSIT
Mine-mouth coal mine	$2,000,000
Export coal mine	$7,000,000
Oil sands mine	$30,000,000
Oil sands mine with upgrader	$60,000,000

Operating Life Deposit—to mitigate the risks at the end of mine life. An operator is required to start posting financial security when there are less than 15 years of reserves left so that all outstanding abandonment, remediation and surface reclamation costs are fully financially secured by the time there are less than six years of reserves left.

Asset Safety Factor Deposit—to mitigate the risks if an operator's cash flow falls below a level deemed adequate to ensure that all MFSP liabilities can be fully funded. The operator posts financial security when the MFSP asset to MFSP liability ratio falls below 3.00. Sufficient financial security must be posted to bring the ratio to 3.00.

Outstanding Reclamation Deposit—to mitigate the risks posed by an operator deferring reclamation. The operator posts security when they do not complete planned reclamation according to the reclamation schedule approved by the government.

Approval holders can elect to place full security at any time in the life of the project based on the MFSP liability calculation. In this case, the approval holder would no longer be subject to the four security deposits described above. The entire coal sector has elected to provide full financial security.

Stand-alone Systems Auditing—Follow-up Audits

REPORT OF THE AUDITOR GENERAL OF ALBERTA

July 2015

Environment and Parks—Systems to Manage the Specified Gas Emitters Regulation Follow-up

SUMMARY

Alberta's *Specified Gas Emitters Regulation*[1] requires large industrial facilities[2] to meet annual emission intensity[3] limits. Facilities that exceed their limit have three options:

- pay into Alberta's Climate Change and Emissions Management Fund at $15 per tonne for emissions over the limit
- use emission credits from previous years or buy credits from facilities that have not exceeded their limit
- buy emission reductions (or offsets) from emission lowering activities such as wind energy generation

The department estimates that the *SGE Regulation* helped reduce emissions by 61 million tonnes and paid $578 million into the Climate Change and Emissions Management Fund, from 2007 to 2014.[4] In contrast, all other actions in Alberta's climate change strategy reduced emissions by approximately 10 million tonnes.

What we examined

We followed up on the recommendations from our 2009[5] and 2011[6] reports. By 2015 we expected the department to:

- clarify its guidance to facilities and to those who verify that facilities are meeting their emission intensity limits
- ensure that facilities follow the department's requirements when they estimate their emission levels
- improve its approach to ensure legitimacy of emission reductions that facilities could use as offsets
- make sure all protocols for offset projects followed the department's standard for activities that could legitimately claim to reduce emissions
- assess whether its regulatory process was cost effective

Overall conclusion

The *Specified Gas Emitters Regulation* is a key action in Alberta's strategy to reduce emissions. The department's progress in implementing our recommendations has been slow—it has not implemented two of the five recommendations.

The department has implemented improvements in some areas where we previously found weaknesses. However, the department still needs to improve its systems to regulate large emitters. Our findings illustrate that there continue to be weaknesses in the consistency and timeliness of key processes,

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1 *Climate Change and Emissions Management Act* , S.A. 2003, *Alberta Regulation* 139/2007.
2 Large industrial facilities are facilities that emit 100,000 tonnes or more carbon dioxide equivalent annually.
3 Emissions intensity is defined as a facility's annual emissions divided by its production.
4 Greenhouse Gas Reduction Program. http://esrd.alberta.ca/focus/alberta-and-climate-change/climate-change-and-emissions-management-fund.aspx
5 *Report of the Auditor General of Alberta—October 2009*, nos. 3-5, pages 40-52.
6 *Report of the Auditor General of Alberta—November 2011*, nos. 1-2, pages 17-23.

including its review of compliance with guidance for tailings ponds emissions, and its review and analysis of protocols.

The department stated that it has faced significant challenges, such as the ongoing cross-ministry review of Alberta's climate change strategy and changes in emission measurement methods. In our opinion, external challenges do not negate the need for good systems. Such systems are critical for the program to achieve desired results.

What we found

The department still has not completed its review of oil sands facilities fugitive emissions from tailings ponds in 2013. [7] It does not yet know if the facilities followed the department's guidance or if it should change the guidance to improve 2015 estimates. Facility verifiers found non-compliance with sampling requirements that could materially misstate the facility's emissions and compliance obligations.

Three years after the department strengthened its record requirements for no till offsets, it still does not know whether those requirements are sufficiently robust or whether those who create the offsets comply with them.[8]

The department does not know whether there are any duplicate offsets in the Alberta registry or offsets posted to both the Alberta and other registries. The department still has not updated the methods to estimate offsets to meet the more robust standard it adopted in 2011. The department lacks evidence that it has a sufficiently robust review of whether activities approved to claim offsets have in fact become standard practice throughout the industry.[9]

Eight years after the *SGE Regulation* came into effect, the department completed its first assessment of the program's cost effectiveness.[10] It showed that the program provides a net benefit, but we identified issues with method and data used in the analysis. Future assessments must use robust methods, and complete and accurate data to produce information the government can rely on to make decisions.

The department implemented our recommendations to clarify its guidance on what information facilities must include in their annual emission reports and how verifiers should conduct verifications to a more robust (or reasonable assurance) standard.

What needs to be done

If the government decides to renew the *SGE Regulation*, the department must implement system improvements to make sure it manages the program well.[11]

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[7] Fugitive emissions are releases of gases or vapours from pressurized equipment due to leaks and other unintended or irregular releases of gases, mostly from industrial activities. These include releases of airborne contaminants such as methane and solvent lost from tailings ponds. After the oil sands have been mined, oil is separated from the sand and sent for further processing. Tailings are the leftover liquid mixture of mostly sand, some water and clay and residual bitumen. Tailings ponds are large engineered dam and dyke systems designed to contain and settle the water, sand, fine clays, silts, residual bitumen and other residual hydrocarbons of the oil sands mining and extraction process.

[8] Tilling is disturbing the soil for placing seeds and fertilizer and to aerate it. Tilling results in faster breakdown of organic matter in the soil and release of greenhouse gas emissions into the atmosphere. Shifting to no till farming can reduce greenhouse gas emissions by increasing carbon dioxide sequestered in the soil, reducing nitrous oxide emissions from less soil disturbance and lowering emissions from farm equipment due to few passes on farm field.

[9] Activities that become common practices in the sector no longer qualify as offsets under the *Specified Gas Emitters Regulation*. The department chose a 40 per cent adoption level of the activity in the sector as representing a common practice.

[10] Cost effectiveness is a type of analysis used to compare the relative costs and outcomes of two or more courses of action. It is typically expressed as a ratio where the denominator is a gain from an action and numerator is the cost associated with that gain.

[11] The *Specified Gas Emitters Regulation* was due to expire on June 30, 2015.

Why this is important to Albertans

If the *SGE Regulation* fails to reduce emissions as expected, the government may not meet its climate change goals. Effective systems for managing the program will help improve the quality of emission reports, ensure facilities meet their obligations and provide reliable information on the program. Regular assessment of the *SGE Regulation*'s cost effectiveness, based on credible methods and data, provides the government with reliable information from which to make decisions about the program.

AUDIT OBJECTIVE AND SCOPE

Our objective was to determine if the department had implemented our recommendations from 2009 and 2011. To perform the audit, we:

- interviewed management and staff to learn what they did in response to our recommendations
- examined the department's processes for administering the *SGE Regulation*
- tested facility and offset reports for compliance with the department's requirements
- examined the department's analysis of the *SGE Regulation*'s cost effectiveness

We conducted our field work from September 2014 to May 2015. We substantially completed our audit on May 8, 2015. Our audit was done in accordance with the *Auditor General Act* and the standards for assurance engagements set by the Chartered Professional Accountants of Canada.

BACKGROUND

Specified Gas Emitters Regulation

The *SGE Regulation* requires all facilities that emit 100,000 tonnes or more of carbon dioxide equivalent[12] annually to meet emission intensity limits. The limit for established facilities is a 12 per cent reduction from the facility's baseline emission intensity. Over 100 Alberta facilities from 13 industrial sectors must comply with the regulation. If a facility's annual emissions exceed its emission intensity limit, its owners must do one of the following:

- pay into the Climate Change and Emissions Management Fund—The fund invests in technologies to reduce emissions and in clean energy projects.
- use or buy emission performance credits—When regulated facilities keep emissions below their intensity limit, they create emission performance credits. A facility can use its own credits from previous years or buy credits from other facilities.
- buy offsets—When non-regulated facilities or sectors engage in activities that reduce emissions (for example, wind energy projects) or help remove emissions from the atmosphere (for example, no till farming), they create offsets. Regulated facilities can buy offsets from the Alberta Emissions Offset Registry.

[12] Carbon dioxide equivalent (CO_2e) is the 100-year global warming potential average of a unit of greenhouse gas (for example, methane) compared to an equivalent unit of carbon dioxide (reference gas).

FINDINGS AND RECOMMENDATIONS

Clarify SGE Regulation guidance documents—repeated from 2009 and 2011

Background

Department's guidance for reporting and verifying emissions

The department uses guidance documents to describe:

- the types of emissions facilities must report and methods they must use to measure samples of those emissions
- what project proponents must do to estimate the amount by which their project will reduce emissions and provide a legitimate emission offset[13]
- what protocol developers must do to develop protocols for Alberta's regulatory system[14]
- how verifiers[15] at facilities and on contract with the department should verify a facility's reports and the offsets it uses to comply with the *SGE Regulation*

In 2009[16] and 2011[17] we recommended that the department clarify its guidance by clearly stating:

- how facilities should sample and calculate their estimates of tailings ponds emissions
- what evidence it expects verifiers to collect to support the validity of offsets from no till farming, and what competencies it requires of agrologists providing services to verifiers or project developers
- what process verifiers should follow when forming conclusions about whether emissions and offset claims are valid
- how offset protocol and project developers should use discount factors and uncertainty calculations when they develop protocols and projects

Fugitive emissions at oil sands facilities

The department's guidance for estimating fugitive emissions from tailings ponds and mine faces provides minimum requirements for using the flux chamber method. This is the method oil sands operators use to gather air samples to estimate these emissions. Oil sands facilities were supposed to meet these requirements as of 2013.[18] The enhanced requirements are designed to improve the estimates by focusing sampling in areas of greatest emissions and uncertainty.

The guidance has minimum requirements for annual sampling of carbon dioxide and methane emissions based on the area the ponds cover, computation of standard error for each area and additional sampling based on the standard error, to reduce uncertainty. Facilities report the calculated emissions in their annual compliance reports, for which they must also submit supporting information. The support includes a report on the annual sampling results, raw emissions data, full calculation of fugitive emissions and area of the ponds.

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[13] Offset project developers are non-regulated parties that develop offset projects. The projects are activities or technologies that help reduce or remove emissions.

[14] Protocols are government approved policies that outline methods that offset project developers must follow to estimate the emission reductions or removals from offset projects. Offset protocol developers are parties that develop protocols.

[15] Verifiers are independent third parties hired by facilities, offset project developers or the department to check reported emission information.

[16] *Report of the Auditor General of Alberta—October 2009*, no. 4, page 46.

[17] *Report of the Auditor General of Alberta—November 2011*, no. 1, page 17.

[18] Quantification of Area Fugitive Emissions at Oil Sands Mines, June 2014. http://esrd.alberta.ca/focus/alberta-and-climate-change/regulating-greenhouse-gas-emissions/greenhouse-gas-reduction-program/compliance-information-for-industry/documents/AreaFugitiveEmissionsOilSandsMines-2014.pdf

Alberta Emissions Offset Registry

Various alternative energy, technology and agricultural projects can either generate energy from sources that produce fewer emissions or remove emissions from the atmosphere. When following government-approved protocols, these projects create offsets that project developers can sell as offset credits through the Alberta Emissions Offset Registry.[19] To register offset credits, project owners must be able to prove they have reduced or removed emissions, using protocols approved by the department.

Once registered, offset credits can be bought and sold in the Alberta offset market. Offset credits remain active in the registry until a regulated facility buys and submits them to the department for compliance. Offset credits can also be sold outside the Alberta market.

Our 2011 audit found that the department needed to document the results of its checks for duplicate offsets. Checking for duplicate offsets helps ensure that the same offsets are not being sold again in Alberta and other markets.

RECOMMENDATION 4: CLARIFY SGE REGULATION GUIDANCE DOCUMENTS—REPEATED

We recommend for a third time that the Department of Environment and Parks clarify the guidance it provides to facilities, verifiers, offset project developers and offset protocol developers, to ensure they consistently follow its requirements to achieve the Alberta government's emission reduction targets.

Criteria: the standards for our audit

The department should clearly communicate its requirements for facilities, verifiers, offset project developers and offset protocol developers. The department should ensure these stakeholders meet regulatory requirements.

The department should document its activities to check for duplicate offsets.

Our audit findings

KEY FINDINGS

- The department improved guidance on how facilities must estimate tailings ponds emissions but still has not determined if oil sands facilities followed it in 2013, or if it needs to change it to improve 2015 estimates.
- The department lacks assurance that its protocol for offsets from no till farming is sufficiently robust to ensure the offsets are real.
- The department lacks processes and evidence to detect duplicate offsets.
- The department improved guidance for offset protocol and project developers.

Department has not determined if oil sands facilities followed its guidance for tailings ponds emissions

More than a year after receiving the oil sands facilities' 2013 reports, the department still does not know whether the four facilities met the new requirements for estimating tailings ponds and mine face emissions:

- Verifiers for one of the oil sands facilities reported that the facility did not meet the minimum requirements from the 2013 guidance. The facility's compliance obligations could be materially misstated as a result.[20] The verifiers initially reported that the department allowed the facility to deviate from the guidance and collect less than one-quarter of emission samples required for this facility. They also reported that the facility's tailings pond emission estimates were significantly lower than in some previous years, despite the tailings ponds having increased in size. Subsequent to the

[19] Alberta Emissions Offset Registry. http://www.csaregistries.ca/albertacarbonregistries/home.cfm

[20] The four facilities reported 2013 fugitive emissions ranging from 5 to 22 per cent of their total annual emissions.

completion of the audit, the department sought out verification from the verifiers on their conclusion and received a response that the verifiers now believe that the facility's approach was acceptable.

- Verifiers for another facility did not notice that the facility had not collected the required samples at one mine site. Nor did the department notice the error when it first reviewed the report. The department reviewer only noticed this deviation from its guidance when assessing the facility's request to restate its 2013 fugitive emissions.

  The department analysis of the restatement request concluded that the facility collected insufficient samples in 2015 at another site, and that the guidance should change to further clarify sampling requirements. However, it still allowed the restatement. This gave the facility $4.5 million of emission performance credits, reversing the facility's original report that it owed this amount to meet its 2013 emission intensity target.

In May 2015 the department still had not completed its review of emissions from the four oil sands facilities and the associated verification reports. The review results are important to assess the compliance and could inform changes to the guidance to improve future estimates. Because of the timing of its review, it may be too late for the department to update its guidance in time for the collection of 2015 emission samples, which typically starts in June.

The department told us it intends to improve its review process, starting with the 2014 compliance period, by completing a focused assessment of all oil sands facilities' compliance with the guidance for fugitive emissions.

Department lacks assurance that offsets from no till farming are real

At the conclusion of our 2011 audit, we reported that the department should assess whether its record requirements for offsets from no till farming were strong enough. The department revised the protocol in 2012[21] but still allows project developers to use farm records with corroborating evidence that is not necessarily from an independent source. Independent corroborating evidence, such as equipment purchase receipts or crop insurance records, is not a requirement.

Verification is the step that provides key information to assess whether protocols are sufficiently robust. For no till projects, third-party verifiers review the claims of project developers and department staff also re-verify the claims. The department's verifier checked the only project used for compliance under the *SGE Regulation* since the revised protocol took effect in 2012. The verifier found that the project developer did not fully meet the protocol's evidence requirements and the claimed offsets could be materially misstated as a result. The project's third-party verifier had not detected this deviation. The department told us it needs to re-verify additional projects once facilities use them for compliance, to assess if the protocol record requirements are sufficient. However, it could have collected data from verification reports for the other no till projects posted on the registry.

Emission reduction claims from no till farming account for 35 per cent of reductions that facilities used as offsets between 2007 and 2013.[22] Three years after the department updated the protocol and project developers used it to estimate emission reductions from no till farming, the department still does not have enough assurance that the protocol's record requirements are robust enough to ensure the offsets are valid.

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[21] Quantification Protocol for Conservation Cropping. http://environment.gov.ab.ca/info/library/8561.pdf

[22] These reductions include those generated under both the previous protocol for no till farming and the 2012 protocol. Emission reduction claims generated under the 2012 protocol account for two per cent of reductions facilities used as offsets in 2012 and 2013.

Department lacks processes and evidence that can detect duplicate offsets

In September 2014 the Canadian Standards Association (CSA) began administering the Alberta Emissions Offset Registry. The previous administrator, C3 (formerly Climate Change Central), no longer exists. The department's contract with C3 required annual checks for duplicates within the Alberta registry and quarterly scans for offsets posted to both Alberta and other key registries.

We found no evidence that C3 completed all of the required checks between 2012 and 2014 or that the department reviewed the results. One annual report the department received from C3 identified 500 potential duplicates in the Alberta registry. The department's senior management told us they assumed C3 resolved these potential duplicates because they did not receive further information. The department needs a higher degree of assurance to know that all offsets used for compliance under the *SGE Regulation* are claimed only once and are therefore valid offsets.

CSA, the new managers of the Alberta registry, plans to complete the first annual check for duplicates in the summer of 2015. However, the department's contract with CSA does not require them to scan registries outside Alberta for duplicates. The department intends to develop procedures for an annual inter-jurisdictional scan of common registries by July 2015, and complete the first scan by October 2015.

The department continues to require project developers to submit statutory declarations attesting that the offsets they are registering have not been posted to another registry. It also expects project developers to notify the department when they become aware of duplicate offsets.

Department improved its guidance for offset project and protocol developers

The department revised its guidance for offset project and protocol developers. The guidance now clarifies how they should use discount factors and uncertainty calculations in developing protocols and projects.

The Alberta Institute of Agrologists released a practice standard for agrologists who provide services under the protocol for no till offsets. It defines mandatory requirements for the agrologists' education, skills and experience. The department intends to update the protocol by July 2015 to explicitly require that agrologists working with the protocol hold approval from the institute to operate under the standard. This will mitigate the risk that no till offsets generated under the protocol are not valid.

Implications and risks if recommendation not implemented

Without robust systems that ensure the validity of emission offsets, facilities may not be meeting their compliance obligations.

Without clear guidance, effective monitoring and consistent treatment of *SGE Regulation* participants, the government will not achieve the emission reductions it expects from this program.

Ensure offset protocols meet new standard and improve transparency —repeated from 2011

Background

Our 2011 audit[23] found that many of the existing protocols did not meet the current protocol development standard and the department had no plan for how it would update them.[24] The department expects the current standard to result in protocols that are more technically robust, verifiable and transparent, and to require stronger evidence that the offsetting activities are in addition to normal industry practices. Our previous audit also found that documents providing technical information about the protocol were not always publicly available.

The department's guidance states that all protocols must undergo a review every five years, at which time the department should also assess the level of adoption in the sector. When the adoption level reaches 40 per cent, the activity or technology is no longer an eligible offset.[25] The department does not otherwise monitor these adoption levels.

RECOMMENDATION 5: ENSURE OFFSET PROTOCOLS MEET NEW STANDARD AND IMPROVE TRANSPARENCY—REPEATED

We again recommend that the Department of Environment and Parks implement processes to ensure that all approved protocols adhere to its protocol development standard.

Criteria: the standards for our audit

Approved protocols should meet the department's protocol development standard. Sufficient information for offset protocols should be available as the basis for deciding whether offsets are valid. This information should also be available to allow the public to understand how the department approves protocols.

Our audit findings

KEY FINDINGS

- New processes for protocol review are planned to be in place by December 2015.
- Only one-third of the department's protocols meet their standard for protocols.
- The department does not have sufficient evidence that activities covered by protocols are still eligible as offsets.
- The department improved its transparency by updating its website with contact information.

In March 2015 the department began implementing a new process to track protocols for review. Senior management told us they rate the risks associated with protocols using criteria such as protocol frequency of use, volume of offsets generated and known issues. For example, a protocol would rate as higher risk if the emission reduction claims from the associated projects were significant. The department will use its protocol risk rating to decide how often to review each protocol.

Under the new risk rating, the review period for some low-risk protocols will exceed five years. This practice is inconsistent with the department's current guidance.

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[23] *Report of the Auditor General of Alberta—November 2011*, no. 2, page 23.

[24] The department's protocol development standard provides requirements and criteria that protocol developers must follow in developing quantification protocols for use in the Alberta offset system. Offset protocols describe the methods offset project developers must follow to estimate the emissions reductions from offset projects.

[25] For an activity to be considered an offset, the protocol developer must demonstrate that the activity results in a reduction in greenhouse gas emissions that are additional or incremental to business as usual/sector common practice and regulatory requirements. Sector level adoption is one of the tests for assessing additionality. If adoption levels are high, the activity is determined to be business as usual. In other words, if a significant number of other people have engaged in the same activity it is assumed that remaining members of the sector can also adopt the activity and/or practice change.

The department does not include non-adherence to its own protocol standard in its rating of protocols for review. We found that only one-third of the 35 approved protocols meet the department's standard for developing offset protocols. This creates a risk that the offset claims from the associated projects are not legitimate.

We tested three protocols the department reviewed since our 2011 audit—biofuel production and usage, solution gas conservation, and landfill gas capture and combustion. The department stated that the first two protocols cover activities that are regulated, therefore it assumed their adoption levels to be below 40 per cent and no analysis was required. The department had no records to support the reasonableness of this assumption. The technical seed document for the landfill protocol included a calculation of the activity adoption level, but the calculation only considered half of Alberta's landfills for which the department had data. We found insufficient evidence that it was reasonable to omit the other landfills from the calculation. Since the adoption level is a key factor in determining whether an activity is still an offset, and the department typically assesses adoption levels on a five-year cycle, it needs to have a more robust assessment process, including good data.

The department intends to finish implementing its new protocol review and development processes by December 2015. The improved process will include focused assessment of activity adoption levels.

The department improved its transparency by updating its website with contact information. It is now possible for stakeholders to ask the department for technical information on the protocols. We did not test whether this process is working.

Implications and risks if recommendation not implemented

If protocols do not conform to the same standard, the department does not have a level playing field for assessing offset projects or assurance that the offset claims are legitimate.

Without a robust process to regularly evaluate the industry's level of adoption for practices that reduce or remove emissions, the department may be allowing facilities to claim commonly adopted activities as offsets.

Assess cost effectiveness of SGE Regulation—implemented

Background

In 2009[26] we recommended that the department assess the cost effectiveness of the *Specified Gas Emitters Regulation*.

We found the department had no information on what costs the facilities incur to comply with the *SGE Regulation*. Therefore, it could not compare the *SGE Regulation* to other regulatory options or to existing systems elsewhere.

Cost effectiveness analyses of regulations help the government make decisions and explain their rationale. Knowing whether a regulation is cost effective can also help the government compare proposed and existing courses of action with alternatives and evaluate which option provides the most benefits at the lowest cost.[27]

[26] *Report of the Auditor General of Alberta—October 2009*, no. 5, page 51.

[27] Anderson, Fred, et. al., Regulatory Improvement Legislation: Risk Assessment, Cost-Benefit Analysis, and Judicial Review. Duke Environmental Law & Policy Forum, 2000, Vol 11, pages 89-138. http://scholarship.law.cornell.edu/facpub/776/

Criteria: the standards for our audit

The department should monitor the cost effectiveness of the *SGE Regulation*.

Our audit findings

KEY FINDING

The department assessed the cost effectiveness of the *SGE Regulation* and concluded the regulation is cost effective and provides a net benefit. However, the methods the department used for this assessment had flaws and the data contained errors.

In March 2015 the department completed its first internal assessment of whether the *SGE Regulation* is cost effective. The assessment covered the period from 2009 to 2013. It concluded that the program's benefits exceed its costs by 50 per cent. However, we found errors in the data and flaws in the methods.

Costs included:

- department's administration costs
- facilities' costs to comply with the regulation

Benefits included emission reductions from:

- operational improvements at facilities
- offsets
- use of cogeneration[28]

Benefits also included avoided societal damages.[29]

The estimate of costs to comply with the regulation are based on incomplete data. The department obtained facility costs from a voluntary survey it conducted in 2012. Only one-quarter of all regulated facilities, representing only half of the industrial sectors, provided cost data. The department's assessment did not consider facility costs in sectors such as coal mining, refining and fertilizing. Costs in those sectors could differ significantly from costs at oil sands facilities and power plants but the assessment assumed these costs to be the same.

The benefits calculation included reductions from no till farming. We previously reported our view that the department should not include such offsets in determining reductions from this program because no till has been a standard practice in Alberta since 2006.[30] Excluding these offsets reduces the net benefit the government can claim for its regulatory system.[31]

The costs and benefits did not include funds granted to facilities for reduction projects through the Climate Change and Emissions Management Fund and facility costs for these projects. Costs also did not include the amounts facilities saved from reduced royalty obligations to offset their *SGE Regulation* compliance costs. Neither did the department consider costs facilities incurred for operational improvements, despite including the associated emissions reductions as benefits.

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[28] Cogeneration is the facility's use of heat generated from production to also generate electricity. It improves the overall efficiency of the facility and can displace electricity from coal, which produces higher emissions.

[29] This is called the social cost of carbon. It represents the benefit to the society, expressed in monetary value, from avoiding the damage caused by each additional metric tonne of carbon dioxide released into the atmosphere. The department used a social cost of carbon of $25 per tonne of emissions reduced as a result of the *Specified Gas Emitters Regulation*.

[30] *Report of the Auditor General of Alberta—July 2014*, no. 2, page 43.

[31] Our understanding is that management has decided to treat no till farming as offsets even though adoption rates for this activity in Alberta already exceeded the rate that is considered common practice. Normally, activities that become common practice no longer qualify as offsets under the *Specified Gas Emitters Regulation*.

Additionally, the assessment used an incorrect number of surveyed and regulated facilities in its calculations and used budgeted rather than actual costs of re-verifications.

Although we were unable to estimate the overall impact of all of the methodology flaws and errors, the credibility of the calculated net benefit is reduced.

The department plans to assess the *SGE Regulation*'s cost effectiveness again in 2016 and every five years afterwards.

We report the recommendation status as implemented because the department completed the first assessment. However, we intend to examine the quality of the 2016 assessment and publicly report our findings.

Implications and risks if recommendation not implemented

Robust analysis of the costs and benefits of the *SGE Regulation* will provide information the government decision makers can rely on when making decisions about the program.

Improve greenhouse gas data quality—implemented

Background

In 2009[32] we recommended that the department strengthen its guidance for facilities' reporting by:

- clarifying when uncertainty calculations[33] must be done
- prescribing data quality standards for the minimum required frequency of measurement and connection to the reporting period
- describing data controls facilities should have in place

Our 2012 follow-up audit found that the department improved its guidance for facilities. To fully implement the recommendation, the department needed to demonstrate that it used the results of its subsequent compliance reviews to determine if it needs to further clarify its guidance for these areas.

Our audit findings

As of 2013, oil sands facilities must provide uncertainty calculations for their annual estimates of fugitive emissions from tailings ponds and mine faces.[34] The department does not require uncertainty calculations for emissions from other sources unless facilities use the least accurate (or alternative) methods to estimate them and the emissions are not negligible.[35] This approach reflects the department's 2011 and 2012 compliance review results, which identified no other emission sources or quantification methods that could pose a significant degree of uncertainty. Based on our testing of 2013 verification reports from facility and department's verifiers, we found the department's approach reasonable.

The department clarified its requirements for the content of facilities' annual emissions reports. Facilities must provide detailed information on their operations, processes, methods and assumptions including

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[32] *Report of the Auditor General of Alberta—October 2009*, unnumbered recommendation, page 40.

[33] Facilities using alternate, less precise calculation methods must include a statement regarding the uncertainty associated with the calculation method. http://esrd.alberta.ca/focus/alberta-and-climate-change/regulating-greenhouse-gas-emissions/greenhouse-gas-reduction-program/compliance-information-for-industry/documents/GuideSpecifiedGasEmissionApplication-2012.pdf

[34] Quantification of Area Fugitive Emissions at Oil Sands Mines, June 2014. http://esrd.alberta.ca/focus/alberta-and-climate-change/regulating-greenhouse-gas-emissions/greenhouse-gas-reduction-program/compliance-information-for-industry/documents/AreaFugitiveEmissionsOilSandsMines-2014.pdf

[35] Negligible emissions are very small in magnitude compared to facility's total annual emissions and do not vary significantly on an annual basis. The negligibility threshold is the lesser of 1,000 tonnes and one per cent of facility's total annual emissions.

what data controls and processes they use to ensure quality of their reports. The department had previously updated its guidance that requires verifiers to understand facility data controls, which is key to designing a valid verification strategy. These changes intend to improve the quality of facility reporting and efficiency of verifications and the department's reviews. Our testing found that facilities' 2013 reports complied with the guidance.

As of 2012, a facility's annual reports must contain information on frequencies of emissions measurement. The department's guidance defines minimum frequency of measurement only for oil sands fugitive emissions and for emissions quantified with the intermittent measurement method.[36] Verifiers and reviewers for the 2013 facility reports we tested did not identify any areas where facilities would require more guidance for frequency of measurement when using other methods.

Improve guidance to verifiers of facility reports—implemented

Background

In 2009[37] we recommended that the department improve its guidance for verifiers by better describing the requirements for the nature and extent of testing, content of verification reports and assurance competencies.

We found that the verifiers were not always clear about the extent of work the department expected them to perform. Verification reports we examined varied in content and did not always contain all the information the department required. There was no guidance on what audit training the verifiers should have.

Our audit findings

The department's guidance for verifications at a reasonable level of assurance[38] took effect in 2012. The guidance includes detailed requirements for planning and carrying out verifications, assessing verification results and forming conclusions. For example, the guidance is now clear on materiality levels[39] and assessment of errors, required testing for consistency of methods between baseline and compliance, and audit team qualifications.

Our testing of 2013 facility reports and associated verification reports found that verifiers complied with the guidance. We found one exception—the department's verifiers were not consistently attesting to audit team competencies and reporting conclusions using standard templates. However, the department's contracting process ensured the verifiers had the required qualifications and the report contained all the information the conclusion template would otherwise include.

To improve the efficiency of the department's review of verification reports for compliance with the required content, the department is developing reporting templates that all verifiers must use starting with the 2015 compliance period.

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[36] Intermittent (periodic) measurements use source (stack) testing which is a "snapshot measurement in time." Several measurements are taken periodically over a year and each measurement is extrapolated over a period of time to determine emissions for that period. http://ccemc.ca/_uploads/CCEMC-458-Validation-Guidance3.pdf

[37] *Report of the Auditor General of Alberta—October 2009*, no. 3, page 42.

[38] Reasonable level of assurance is the accumulation of evidence necessary for the verifier to conclude that the facility or project developer assertion is not materially misstated.

[39] Materiality is used to distinguish between significant and non-significant misstatements. Information is material if its omission or misstatement could influence decisions of its intended users taken on the basis of the greenhouse gas assertion.

Appendix

OUTSTANDING RECOMMENDATIONS FROM PREVIOUS CLIMATE CHANGE AUDITS

Recommendations from our October 2008 report

RECOMMENDATION 11: PUBLIC REPORTING—REPEATED OCTOBER 2012[40]

We recommend that the Department of Environment and Parks improve the reliability, comparability and relevance of its public reporting on Alberta's results and costs incurred in meeting climate change targets.

RECOMMENDATION 9: PLANNING—REPEATED JULY 2014[41]

We recommend the Department of Environment and Parks improve Alberta's response to climate change by:

- establishing overall criteria for selecting climate change actions
- creating and maintaining an implementation plan for the actions necessary to meet the emission intensity target for 2020 and the emission reduction target for 2050
- corroborating—through modeling or other analysis—that the actions chosen by the ministry result in Alberta being on track for achieving its targets for 2020 and 2050

RECOMMENDATION 10: MONITORING—REPEATED JULY 2014[42]

We recommend that for each major action in the 2008 Climate Change Strategy, the Department of Environment and Parks evaluate the action's effect in achieving Alberta's climate change goals.

Recommendations from our October 2009 report

RECOMMENDATION: OUTSOURCED SERVICE PROVIDERS[43]

We recommend that the Department of Environment and Parks develop controls to gain assurance that data hosted or processed by third parties is complete, accurate and secure.

We also recommend that the Department of Environment and Parks formalize its agreement with its service provider for the Alberta Emissions Offset Registry.

40 *Report of the Auditor General of Alberta—October 2008*, page 101.
41 Ibid, page 97.
42 Ibid, page 100.
43 *Report of the Auditor General of Alberta—October 2009*, page 49.

Health and Alberta Health Services—Systems to Manage the Delivery of Mental Health Services Follow-up

SUMMARY

Mental illness affects one in five Albertans during their lifetime. Severe and persistent mental illness is a chronic disease and should be treated like one. Even minor or episodic mental health problems can easily deteriorate into lifelong chronic illness, without proper and timely treatment. Mental illness is often experienced along with other chronic diseases and significantly complicates their treatment.

What we examined

With this follow-up audit, we applied the chronic disease management model to examine how well the health system meets the care needs of people with serious mental illness. We frame our findings within the model described in our September 2014 report on chronic disease management.[1]

The key feature of that model is patient-centred care—care organized around the needs of patients rather than around the structure of the health system.

Overall conclusions from our follow-up audit

Systems to deliver mental health services in Alberta should be improved.

The Department of Health has failed to properly execute its addiction and mental health strategy.[2] There is no need to redesign the strategy; rather the department needs to carry it out. The department also has not done any detailed analysis or reporting on the strategy. Without analysis it is not possible to know if, and how, the plan has led to significant and meaningful change in how mental health and addictions patients are cared for.

AHS has made important improvements since our original 2008 mental health audits. For the most part, however, the delivery of frontline addiction and mental health services remains unintegrated and allows ongoing gaps in service continuity. We found this lack of integration affected healthcare services in the following three areas.

Disjointed care planning and delivery among healthcare providers and programs
Healthcare providers continue to treat patients in isolation, often not knowing what services the patient is receiving from someone else. AHS indicated this is primarily because it does not have control over all key elements of the public healthcare system and lacks clear authority to deploy a provincial integrated case management mechanism.

1 *Report of the Auditor General of Alberta—September 2014*, page 3.
2 2011 Creating Connections: Alberta's Addiction and Mental Health Strategy http://www.health.alberta.ca/documents/Creating-Connections-2011-Strategy.pdf

Limited sharing of clinical information among service providers within AHS
AHS's mental health information systems remain incompatible, are outdated and do not support integrated care delivery. AHS told us it has not developed specialized mental health information management systems because it is developing a province-wide central clinical information system that would serve all its clinical areas.

Uncoordinated frontline delivery of housing support services
There has been no significant change in this area. In many parts of the province patients, their families and individual care providers must navigate the system on their own to find the right housing placement and the right level of support. AHS believes it does not have a clear responsibility for mental health housing support delivery as there are numerous other government entities involved in this area.

In our opinion, AHS has both the mandate and capacity to coordinate the efforts of those entities that should be involved in integrating public mental health and addictions services in Alberta.

Overall key findings
AHS has made improvements in a number of areas we examined in our original 2008 audits. It has:

- made progress by better coordinating services offered through its community mental health clinics and addictions clinics
- improved processes at community mental health clinics to manage wait lists and reduce wait times for mental health programming
- partnered with several primary care networks to enhance mental health treatment available to patients at these clinics

However, the department and AHS still need to deal with shortcomings in Alberta's mental health and addictions service delivery system. The formation of AHS as a single entity delivering health care in Alberta offered significant opportunities to integrate mental health service delivery across the entire continuum of care. These opportunities were largely missed. In our 2011 progress report we noted that the department and AHS planned to implement our recommendations from 2008, and were starting to take action in key areas.[3] In 2014 we found that the momentum from 2011 was either lost or had failed to bring about significant change in the delivery of health care. Several key initiatives were discontinued or changed direction.

Progress on implementing the addictions and mental health strategy

Since our last progress report, the action plan[4] to implement the addiction and mental health strategy has not been followed. The department needs to identify, monitor and report on specific tasks, targets, timelines and deliverables to ensure measurable progress is being made to implement the strategy. There has been no meaningful reporting on, or evaluation of, implementation progress. Although the department and AHS have improved coordination and are working on a number of activities intended to move the strategy forward, we were unable to determine whether, and when, these projects will achieve the improvements to mental health and addictions service delivery envisioned by the strategy.

[3] *Report of the Auditor General of Alberta—November 2011,* pages 27-32.
[4] Creating Connections: Alberta's Addiction and Mental Health Action Plan 2011–2016 http://www.albertaaddictionserviceproviders.org/ccactionplan2011.pdf

Integration of provincial addiction and mental health service delivery

Overall, delivery of frontline addiction and mental health services remains unintegrated and there are gaps in service.

Between the various publicly funded providers of mental health and addictions services there is no integrated case management system. An integrated system would provide Albertans who have severe and persistent mental illness with a comprehensive care plan that follows them through the healthcare system, and a care team responsible to help keep them on an optimal care path. AHS indicated the main reason for this is that it does not have control over all key elements of the public healthcare system and lacks clear authority to deploy a provincial integrated case management mechanism.

We found that:

- AHS does not have an operational model for integrated case management for its community and hospital mental health and addictions services that clearly defines:
  - who prepares the integrated care plan and where
  - how the care teams are to be organized and managed
  - who is responsible to help patients stay on an optimal care path
  - how patient outcomes are to be evaluated
- Emergency departments in many rural hospitals have limited access to support from mental health and addiction services. Emergency room staff at both rural and urban hospitals do not have access to patient information in AHS community addiction and mental health information systems.
- The 4,000 family physicians in the province and AHS's 1,800 community mental health and addictions staff do not have an effective means of sharing patient records and they develop different treatment plans for the same patient, in isolation from one another.
- Staff compliance with case management expectations at AHS community clinics remains a problem in some areas.
- AHS needs to improve its process to formally identify and evaluate potential good practices in operational service delivery and deploy the best ones across the province.

Clinical information management in mental health and addictions

AHS uses incompatible and outdated systems it inherited from the former health regions for its inpatient and community mental health and addictions services. This does not support sharing of information and integration of frontline service delivery; many hospitals and community care providers are unable to exchange clinical information from health records electronically.

Most caregivers continue to use cumbersome paper-based methods, when records are exchanged at all. AHS has not created specialized mental health and addictions health information management systems because it continues to develop a unified province-wide health information management solution to serve all clinical areas. This unified clinical information system may take five to ten more years to materialize, at an estimated cost of $1 billion; $1.5 billion if physician offices are included. In the interim AHS does not have a plan to identify opportunities to integrate care through better use of clinical data in the existing mental health and addictions information systems.

AHS does not have an efficient system to collect, enter and process individual patient assessment data. Clinicians use a treatment outcome measurement tool to gather this data in a variety of clinical programs. The current system is cumbersome and does not ensure compliance with the measurement tool's requirements.

Community housing supports for people with mental illness

The importance of community housing support services to treat chronic mental illness may not be immediately obvious. A shortfall in such services has led to hundreds of people with mental illness occupying expensive acute care hospital beds for thousands of days longer than necessary every year, as they are forced to wait to find a suitable placement in the community. Treatment in the community may also be less effective if safe and stable housing is not available.

Delivery of community support services does not require AHS to deliver affordable housing. What is required is a stronger effort to support people where they live and an organized approach to placements. Some in-home support services are as simple as weekly visits to help with basic activities of daily life. Appendix C notes progress underway related to housing.

AHS does not have a formal coordinating mechanism to connect its community and hospital patients with the appropriate housing supports available in the 550 mental health community spaces it funds directly, and about 1,850 spaces independently provided by various community agencies. AHS does not have a formal instrument to assess the community housing support needs of these patients. In most parts of the province AHS does not maintain waitlists. Finding a community placement for a patient is largely based on persistence and the advocacy skills of their family and care providers.

AHS continues to prepare an assessment of gaps between supply and demand for mental health and addictions housing supports, which it hopes to finish in 2015. However, it is not clear who will fill any identified gaps. AHS indicated it has no process at the corporate level to develop and manage housing and support services because it has no clear responsibility or mandate to do so. Because other government organizations have a mandate over various aspects of community housing, AHS believes it does not have the authority to lead or direct work to ensure a sufficient supply of mental health and addictions placement options in the community.

What we found

Treatment of mental illness in Alberta shows some movement in the direction of patient-centred care. In many cases these incremental improvements are driven by local Alberta Health Services staff and community service providers. However, the current framework of healthcare delivery does not support a coordinated, province-wide approach to providing patient-centred care.

What needs to be done

With this follow-up audit, we replace 11 recommendations (see Appendix A) to the department and AHS with one new recommendation to the Department of Health and three to AHS. The department needs to provide the leadership and resources for fulfilling its goal of providing patient-centred care for Albertans who have mental illness or addictions. To provide patient-centred care, AHS needs to better integrate its services and eliminate gaps in the services it provides to individual patients.

Under patient-centred care, patients with severe and persistent mental health and addictions problems would benefit from:

- a single, comprehensive care plan
- a single health record, available to healthcare providers at the point of care
- teamwork among providers of different services to guide the patient along a single, clear, optimum care path
- active contributions by patients and their families to the care plan and the health record
- community housing support services that are an integral part of treatment

Our recommendations

We make one recommendation to the Department of Health and three to Alberta Health Services:

Recommendation: Use action plan and progress reporting to implement strategy

We recommend that the Department of Health:

- use an action plan to implement the strategy for mental health and addictions
- monitor and regularly report on implementation progress

Recommendation: Integrate mental health service delivery and eliminate gaps in service

We recommend that Alberta Health Services for its own community and hospital mental health and addictions services:

- work with physicians and other non-AHS providers to advance integrated care planning and use of interdisciplinary care teams where appropriate for clients with severe and persistent mental illness who need a comprehensive level of care
- improve availability of mental health resources at hospital emergency departments
- improve its system to monitor and ensure community mental health clinics comply with AHS's expectations for treatment planning and case management
- improve its process to identify and evaluate good operational practices used by local mental health and addictions staff and deploy the best ones across the province

Recommendation: Improve information management in mental health and addictions

We recommend that Alberta Health Services make the best use of its current mental health and addictions information systems by:

- providing authorized healthcare workers within all AHS sites access to AHS mental health and addictions clinical information systems
- strengthening information management support for its mental health treatment outcomes measurement tools

Recommendation: Complete assessment and develop waitlist system for Albertans who need community housing supports

We recommend that Alberta Health Services in supporting the work of the cross-ministry housing planning team established under the mandate of the Minister of Seniors:

- complete its assessment and report on gaps between supply and demand for specialized community housing support services for mental health and addictions in the province
- develop a waitlist management system to formally assess the housing support needs of AHS's mental health hospital and community patients and coordinate their placement into specialized community spaces funded by AHS

Why this is important to Albertans

Mental illness and addiction take a significant toll on the health of Albertans, and on the cost of providing health care. They also have a significant direct and indirect societal impact.

AUDIT OBJECTIVES AND SCOPE

We changed our approach in this follow-up audit, as a result of the work we did on the September 2014 Chronic Disease Management systems audit.[5] Our 2014 CDM audit report focused on the Department of Health and AHS's system-wide approach for managing all chronic diseases and conditions, which include serious mental illness and addictions.

Our overarching objective was to determine whether the department and AHS have achieved fundamental change and improvement in key areas identified in our 2008 reports. We frame our findings in the context of the chronic disease treatment model.

In performing this audit of mental health services we:

- reviewed relevant documentation from the department and AHS and interviewed management at both entities
- visited hospitals and community mental health and addiction clinics in the five AHS geographic zones and interviewed management and staff at these locations
- examined a sample of files at each location for adult patients and clients admitted or discharged between January 2013 and February 2014

The original audit and this follow-up focused on publicly funded inpatient and community-based mental health services for adults (those aged 16 to 64). We did not look at mental health services for children, seniors or forensics.

We carried out our work between January 2014 and March 2015. We substantially completed our audit on April 29, 2015. Our audit was conducted in accordance with the *Auditor General Act* and the standards for assurance engagements set by the Chartered Professional Accountants of Canada.

BACKGROUND

In 2008 we performed an audit of systems used to deliver mental health services in Alberta. We reported our audit findings and recommendations in two phases. Phase one, reported in April 2008, examined whether the then Alberta Mental Health Board[6] and the Department of Health had adequate systems to monitor and report on the implementation progress of the priorities set out in the 2004 Provincial Mental Health Plan for Alberta.[7]

The second phase, reported in October 2008, examined the then regional health authorities'[8] mental health operations and service delivery across the province, focusing on inpatient and community-based mental health services for adults. [9]

5 *Report of the Auditor General of Alberta—September 2014.*
6 In April 2009 this entity and its role in the area of mental health became part of the newly formed Alberta Health Services (AHS).
7 *Report of the Auditor General of Alberta—April 2008*, pages 63-93.
8 In April 2009 the nine geographically based health regions were replaced by AHS.
9 *Report of the Auditor General of Alberta—October 2008*, pages 151-205.

Mental illness and addiction in Alberta

One in five Albertans (about 20 per cent of the population) will suffer a mental disorder in their lives.[10] Suicide, for example, is a primary cause of death among some age groups and populations. Nationally, seven times more Canadians died by suicide than assault in 2011 (3,726 and 521, respectively).[11] Each year suicide accounts for about 500 deaths in Alberta,[12] which is roughly 50 per cent more than the number of traffic fatalities.[13] About 90 per cent of people who end their own life suffer from a mental illness.[14] Each year, there are over 6,000 emergency room visits and over 2,000 hospitalizations due to intentional self-inflicted injuries.[15]

The results from a 2012 Statistics Canada mental health prevalence survey[16] show 10.9 per cent (325,124 people) of responding Albertans aged 15 and older reported having symptoms consistent with a least one of six mental or substance abuse disorders[17] in the previous 12 months. The economic burden of mental health problems is one of the costliest in Canada, estimated at $14.4 billion.[18]

The department and AHS's Creating Connections: Alberta's Addictions and Mental Health Strategy makes a compelling case for change.[19]

> "Everyone is affected by mental illness. One in five people experience a mental illness in their lifetime, and the remaining four have a friend, family member or colleague who has been or will be affected (Health Canada 2002). Everyone is similarly affected by substance abuse: as many as 10 per cent of people over age 15 may be dependent on alcohol or drugs (Centre for Addiction and Mental Health: Mental Health and Addiction Statistics 2010), and some are experiencing both mental disorders and substance abuse problems (Rush et al., 2008).
>
> The consequences of addiction, mental health problems and mental illness reach well beyond individuals. When prevention programs are unavailable, or when affected individuals are not able to access treatment and assistance, people's functioning is impacted in all areas – work productivity, family stability, health and quality of life. This, in turn, impacts the well-being of the entire population.

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10 http://www.health.alberta.ca/documents/GAP-MAP-Report-2014.pdf, page 18.
11 Statistics Canada: http://cansim2.statcan.gc.ca/cgi-win/cnsmcgi.exe?Lang=E&ArrayId=V892&ResultTemplate=NoMenus&RootDir=CII/&Interactive=1&OutFmt=HTML2D&Array_Retr=1&Dim=-&C2Sub=HEALTH&accessible=1
12 Centre for Suicide Prevention: https://suicideinfo.ca/Library/AboutSuicide/Statistics.aspx
13 Alberta Traffic Collision Statistics 2012: http://www.transportation.alberta.ca/Content/docType47/Production/AR2012.pdf
14 Canadian Mental Health Association: http://alberta.cmha.ca/mental_health/statistics/
15 http://www.albertahealthservices.ca/2774.asp
16 http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=1051101&paSer=&pattern=&stByVal=1&p1=1&p2=31&tabMode=dataTable&csid
17 The six disorders measured by the survey were major depressive episode, bipolar disorder, generalized anxiety disorder, and abuse of or dependence of alcohol, cannabis or other drugs.
18 http://alberta.cmha.ca/mental_health/statistics/
19 Creating Connections: Alberta's Addictions and Mental Health Strategy, pages 4-5. http://www.health.alberta.ca/documents/Creating-Connections-2011-Strategy.pdf

The economic burden of addiction, mental health problems and mental illness is staggering. For example:

- The World Health Organization estimates that 40 per cent of all the days 'lived with disability' throughout the world are because of mental health or alcohol problems (World Health Organization 2001).
- The World Health Organization estimates that by 2020 the burden to individuals and society caused by mental illness will outstrip that of all physical disorders except for coronary heart disease (World Health Organization 2004).
- Every day, 500,000 Canadians are absent from work due to mental illness (Institute of Health Economics 2008).
- Twenty per cent of Canadian seniors currently have some form of mental illness. It is expected that the prevalence of dementia in Canada and Alberta will double between 2008 and 2038. In Alberta, this means almost 102,000 Albertans (2.2 per cent of the total population) would have some form of dementia by 2038, compared to 40,000 Albertans (1.1 per cent of the total population) in 2008. With the population of seniors expected to increase significantly in Alberta, their mental health issues will continue to require appropriate programs and services.
- Alcohol abuse costs Albertans $855 million in lost productivity, $407 million for direct healthcare services, and $275 million for law enforcement annually (AHS 2006; AADAC and AGLC 2007).
- Alcohol-attributed illness accounts for approximately 1.6 million hospital days, representing $1.5 billion in direct costs to the health system, and $3.3 billion in indirect costs to the Canadian economy annually (CCSA 2010).

While the economic burden of mental illness constitutes more than 15 per cent of the burden of disease in Canada, these illnesses only receive 5.5 to 7.3 per cent of healthcare dollars (Institute of Health Economics 2008)."

Structural changes in the healthcare system since 2008

Since the original reporting of our recommendations, the healthcare system has been significantly restructured. The Alberta Mental Health Board, Alberta Alcohol and Drug Abuse Commission and the nine geographically based health regions were replaced with Alberta Health Services in 2009. This fundamentally changed the management structure and accountability for addiction and mental health service delivery in Alberta.

In September 2011 the department released *Creating Connections: Alberta's Addiction and Mental Health Strategy*. The 2011 strategy replaced the 2004 *Provincial Mental Health Plan* we reported on in April 2008. The objectives of the 2011 strategy are to "transform the addiction and mental health system in Alberta" with an ultimate goal "to reduce the prevalence of addiction, mental health problems and mental illness in Alberta through health promotion and prevention activities and to provide quality assessment, treatment and support services to Albertans when they need them."[20]

[20] http://www.health.alberta.ca/documents/Creating-Connections-2011-Strategy.pdf, page 3.

Overview of Alberta's current publicly funded mental health and addictions services

Most of the mental health and addictions services in Alberta are provided by AHS and physicians, at an annual cost of about $700 million and $121 million, respectively.

Hospitals

- Emergency departments: emergency departments are a key point of entry into the healthcare system for Albertans with mental illness and addictions. There are 98 emergency departments in the province, 89 of which are accessible 24 hours a day. About 59,000 individuals diagnosed with a primary mental disorder accounted for 89,700 emergency department visits (4.2 per cent of all emergency department visits) across Alberta in the fiscal year 2012–2013.
- Inpatient psychiatric units: There are 16 hospitals with 672 acute care psychiatric beds in Alberta.[21] An additional 805 beds are associated with programs at Alberta Hospital Edmonton, Centennial Centre (Ponoka), the Claresholm Care Centre and the Southern Alberta Forensic Psychiatric Centre.[22] Across these facilities, 16,430 individuals had a total of 22,085 inpatient stays[23] for a total of 616,750 inpatient days in fiscal year 2012–2013. The average length of stay for mental health and addictions patients was about 28 days, which is 4.5 times longer than for patients without a mental health diagnosis. The average cost per day at a hospital is estimated at $1,500.
- Outpatient supports: Discharged patients come to the hospital to get continuing support, either individual therapy or group counseling.

AHS community clinics

There are 132 community mental health and addictions clinics in Alberta staffed with approximately 1,200 full-time equivalent (FTE) therapists and counsellors, including 39 clinics where mental health therapists and addictions counselors are co-located.

AHS's mental health and addictions clinics are located in communities throughout Alberta. These clinics offer assessment, treatment and a variety of programs, including:

- individual therapy ranging from several sessions for short-term situational problems to long-term ongoing support for those with chronic and complex needs
- group therapy and activities
- walk-in crisis management (typically a single session)

Each year, there are about 1,000,000 patient visits to all of AHS's community mental health and addictions services. We were not able to obtain detailed service utilization data for mental health clinics.

[21] Based on number of beds reported in the AHS Beds Staffed and in Operation Survey completed on September 30, 2014. We have excluded 12 acute care psychiatric beds at the Alberta Children's Hospital from this total.

[22] This does not include 150 standalone psychiatric beds at Villa Caritas, an acute mental health facility focusing on the care of seniors with complex mental health illness.

[23] This is for patients with a primary diagnosis of mental disorder upon admission who were discharged from hospital during the 2012–2013 fiscal year. Costs are based on average inpatient rates for Alberta.

Outreach and emergency mobile support
Typically based out of community clinics, these mental health and community living support services can be taken to the client rather than having the client come to the service. Services offered can include:

- street outreach for the homeless
- mobile crisis response teams that go to peoples' homes[24]
- assertive community treatment (ACT) for high needs, long-term clients who require ongoing and intense support to be able to remain in the community
- Independent Living Support (ILS) for lower need clients who require help with day to day tasks such as appointments, shopping or home maintenance

AHS has approximately 600 FTE staff positions providing these services throughout Alberta. We were not able to obtain detailed service utilization data for community outreach and emergency mobile services.

Community primary care
General practitioners are often the first point of contact and treatment for many mental health patients. Specialist practitioners, mainly psychiatrists, are also important providers of mental health services in the community and in hospitals.

- 573,500 individuals presenting with a mental illness or disorder accounted for 1,867,000 visits to 3,800 family physicians in fiscal 2012–2013
- 162,100 individuals had a total of 1,782,000 visits to 2,200 specialists

Community housing support services
Many people with mental illness and addictions live and receive treatment in the community. Many can live a successful life if they receive the right level of support in their own home. Others may need a safe and appropriate placement with the regular presence of healthcare providers. Generally, it is better for the patient and much more cost effective for the healthcare system, to help patients succeed in the community and avoid hospitalization.

Not-for-profit organizations own and operate community housing, including about 2,400 spaces for people with mental illness and addictions, with varying levels of on-site support. AHS currently funds about 550 of these mental health spaces throughout the province. AHS also funds 452 community beds specifically for patients with addictions.

AHS also provides in-home community supports to mental health and addictions patients through outreach and emergency mobile support services. These supports help patients stay in their own home and successfully continue their treatment in the community by providing assistance with often basic activities of daily living or get them care in the appropriate setting if they are observed to be going into crisis.

[24] This can include Police and Crisis Teams (PACT), which pairs a police officer with a mental health worker. There are PACT teams in place in a number of regions including Edmonton, Calgary, Grande Prairie and Red Deer. For more information see http://justice.alberta.ca/programs_services/safe/Pages/PACT.aspx.

FINDINGS AND RECOMMENDATIONS

Progress on implementing the addictions and mental health strategy

Background

The 2004 Provincial Mental Health Plan aimed to improve mental health delivery across Alberta through integration of mental health services across the continuum of care. The goal was to incorporate services into the broader healthcare system and fill gaps in service delivery.

The department and AHS replaced the 2004 plan in 2011 with Creating Connections: Alberta's Addiction and Mental Health Strategy.[25] Unlike the 2004 plan, this strategy included an accompanying detailed five-year action plan. The 2011 strategy reflects structural changes introduced with the formation of AHS, but otherwise endorses the same concepts in mental health service delivery as the 2004 plan. With development led by the department and AHS, the strategy included the active collaboration of other government ministries and various community stakeholders and not-for-profit organizations. The strategy identifies five strategic directions,[26] each having its own priorities, expected key results and initiatives (or actions) to achieve these priorities.

In 2008 we concluded that systems intended to implement the plan were not well designed. We identified the following weaknesses:

- There was no system to establish what entity or group had the overall authority and responsibility to:
  - assign specific parties to work on the priorities
  - monitor work on individual priorities and take required remedial action
  - regularly and publicly report on implementation progress
- Because the plan resulted from a collaborative effort by many organizations, it was not clear who was accountable for its implementation or reporting on its progress.

RECOMMENDATION 6: USE ACTION PLAN AND PROGRESS REPORTING TO IMPLEMENT STRATEGY

We recommend that the Department of Health:

- use an action plan to implement the strategy for mental health and addictions
- monitor and regularly report on implementation progress

Criteria: the standards for our audit

- Responsibility for each priority should be clearly assigned.
- An implementation plan and/or process should be created for each priority.
- Progress in implementing the strategy should be monitored and periodically reported.

[25] Creating Connections: Alberta's Addiction and Mental Health Strategy, September 2011 - http://www.health.alberta.ca/documents/Creating-Connections-2011-Strategy.pdf

[26] The five strategic directions are:
1. Build health and resilient communities
2. Foster the development of healthy children, youth and families (including seniors)
3. Enhance community-based services, capacity and supports
4. Address complex needs
5. Enhance assurance

Our audit findings

KEY FINDINGS

- The 2011 Addiction and Mental Health Strategy, like the 2004 Provincial Mental Health Plan before it, identifies all the right things that need to be done. There is no need to drastically redesign the strategy. There is a need to deliver on the solid goals already set by following an existing action plan to make these concepts a reality.
- The department has not followed its detailed five-year action plan. This plan identifies implementation timelines for each priority initiative, entities primarily responsible for implementation and potential performance measures. We were not able to determine the progress made by the department and AHS in implementing their strategy.
- The department has not done detailed analysis or reporting of progress in implementing the 2011 strategy. Without this it is not possible to determine if, and how, the work done to date on the strategy has resulted in significant and meaningful change in how mental health and addictions patients are cared for.

Action plan not followed

The department's addiction and mental health strategy sets solid high-level strategic directions and goals. Like the 2004 plan, the 2011 strategy emphasizes integrated service delivery across the continuum of care, patient and family centred care, comprehensive care planning, interdisciplinary teams, community-based services and housing supports, outcomes measurement and accountability.

The 2011 strategy stated specific desired outcomes and outlined specific initiatives to achieve those outcomes. It contained priority initiatives to, among other things:

- implement a chronic disease management approach to addictions and mental health
- establish an integrated case management approach to delivering client-centred housing, and addiction and mental health services
- leverage technology for better information sharing
- improve access to addiction and mental health services in primary care
- increase the capacity of rural communities to provide addiction and mental health services
- establish a clear framework for supportive housing, treatment and care options, provider roles and funding accountabilities
- identify major housing and service gaps across the age span and level of need, and develop initiatives to target these areas

However, the strategy itself contains no timelines, no endpoint when it should be fully implemented, or any milestone review dates for making adjustments. The accompanying detailed five-year action plan identified potential quantitative performance measures for each of the strategy's priorities, established implementation timelines and identified entities responsible. Of the 77 strategy initiatives across the five strategic directions, 50 were shown as the primary responsibility of AHS and/or the department; the remainder required coordinated action with other government ministries or non-government organizations. The action plan also stipulates that implementation timelines would be reviewed and updated annually, and that the plan would be evaluated in its last year (2015–2016).

We found no evidence that the action plan has been followed nor were we able to determine the progress made by the department and AHS in implementing their strategy. According to the action plan's timeline, many of these priority initiatives were supposed to be completed by now.

Implementation progress is not measured and not reported

Although numerous projects are ongoing, and some completed, there has been no analysis done to assess if, and how, these projects have produced the desired result: patient centred coordinated service delivery across the continuum of care. We were not able to determine whether and when these activities will achieve the improvements to mental health and addiction services envisioned in the strategy.

In April 2015 the department released its only interim report on implementing the 2011 strategy.[27] We do not view this document as an example of adequate assessment and reporting of implementation progress. It offers no detail on what was completed and what measurable impact it had at the front line, what remains to be done, by whom and by when.

The 2015 report provides a high level view only and contains no analysis or detailed information to demonstrate how any of the projects associated with the strategy have improved the mental health delivery system. Progress and final reports for some individual projects have been completed separately. Most of these have not been made public. Reporting needs to be regular, complete and public, and needs to show the operational impact of the Addictions and Mental Health Strategy on the frontline of healthcare delivery and on the patients' health outcomes.

Improvements noted

In contrast to the 2004 plan, a governance framework is in place to facilitate implementation of the 2011 strategy, with each level having specific terms of reference, roles and responsibilities. See Appendix D for a description of this governance structure. This framework puts in place a process for an Executive Steering Committee, with input from an Advisory Committee to identify and rank projects for the coming year. There is also an established process for the execution of each project.

Documents we reviewed showed 25 projects across the five strategic directions of the strategy were initiated in 2012–2013, with work on 21 of these continuing into 2013–2014 along with six new projects started that year. However, despite these improvements, what is lacking is a process for the steering committee to evaluate if, and how, these individual projects collectively will improve the delivery of mental health and addictions services and meet the goals and objectives set out under the strategy.

A Secretariat maintains an internal Implementation Summary Dashboard which tracks the progress of all current strategy initiative projects and provides a synopsis of expected deliverables, a summary of work completed and what needs to be done for each of these. Updated dashboard reports are provided quarterly to the steering committee for discussion at its meetings. The most recent dashboard report we reviewed[28] shows 30 active projects across the five strategic directions, with seven of these shown as being complete. However, these dashboard reports are not a replacement for the action plan, because of their limited scope. They only focus on the execution of current projects and do not provide an overall implementation framework for the strategy as a whole or the level of performance measurement as set out in the action plan.

Implications and risks if recommendation not implemented

Without following a clear and measurable path toward integrated healthcare services, there is a risk that the department and AHS will expend their efforts on incremental changes and basic maintenance of the existing system without making the needed comprehensive and significant changes which have been identified.

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[27] http://www.health.alberta.ca/documents/Mental-Health-Creating-Connections-Report-2015.pdf
[28] For the September 2014 to August 2015 reporting period.

Without an effective means to measure and analyze the results from projects associated with strategy implementation, it is difficult to determine if, and how, these efforts are actually integrating the current disjointed model of mental health and addictions care and service delivery. Regular detailed public reporting is required for transparency and accountability, and is necessary to demonstrate to Albertans what actual results are being achieved from strategy implementation and how these are improving delivery of mental health and addiction services to the public.

Integration of provincial addiction and mental health service delivery

Background

The fundamental premise of integration is that by acting as one team, healthcare providers can achieve more for their patients than by acting in isolation. An integrated system ensures that providers in various settings and at various levels of care:

- work together to plan and deliver care to each patient
- use and contribute to a single health record
- guide each patient along an optimal care path through the healthcare system
- provide for clear accountability for care outcomes

Not all Albertans who suffer from mental health or addictions problems require complex ongoing care. Some patients present with episodic conditions that, with prompt and proper treatment, can be resolved without the need for ongoing intervention. On the other hand, there are patients whose mental health and addictions problems are severe and persistent and follow a pattern similar to that of chronic disease. Such chronically mentally ill patients benefit from an integrated approach to treatment, complete with a single comprehensive care plan, multidisciplinary care team, and a robust case management process.

No healthcare professional group alone can meet the care needs of patients suffering from serious mental illness or addiction. Physicians are experts in treating medical conditions and managing medications. Non-medical interventions are the expertise of psychologists, addictions counsellors, social workers and registered psychiatric nurses. Patients receive the best care when all these professionals operate as one team and follow a single care plan.

These concepts are not new. The 2004 Provincial Mental Health Plan aimed to improve mental health delivery across Alberta through integration of mental health services across the continuum of care. The goal was to incorporate services into the broader healthcare system, and fill existing gaps in service delivery.

Community Treatment Orders were introduced in 2010 by an amendment to the *Mental Health Act,* for individuals with mental illness meeting the requirements outlined in legislation.[29] Application of a CTO is appropriate only for some patients, and can be one of the tools for supporting comprehensive case management across the continuum of care.[30] CTOs are for individuals with serious and persistent mental illness who have shown that without community treatment and support they may end up in a recurring cycle of formal hospitalization, deterioration after discharge and subsequent readmission to hospital. AHS's various mobile community mental health teams deal with these individuals to ensure they comply with their orders. The makeup of these teams vary by zone but typically involve both mental health

[29] *Mental Health Act*, (RSA 2000 cH M-13), s. 9.1(1).

[30] A Community Treatment Order is not court ordered; rather it is a treatment and care plan tailored to an individual's specific needs and is intended to help them comply with treatment in a community setting rather than a mental health facility. For more information on Community Treatment Orders see http://www.health.alberta.ca/newsroom/community-treatment-orders-MHA.html.

therapists and independent living support type workers. AHS currently monitors about 579 individuals on CTOs across the province.[31]

In 2008 we found that the system was not integrated and there was no clear corporate direction or concrete action plan to achieve integration of mental health and addiction services along the continuum of care. The 2004 plan outlined all the right high level goals and objectives, but there was no action plan to make them a reality. Community mental health clinics, substance abuse programs, family physicians, hospital emergency departments and inpatient programs worked in operational silos. Patients and their families were often left to navigate through the system without a clear care path and without anyone clearly in charge of coordinating their care. A patient could have multiple care plans created by various providers across the system, all working in isolation from one another. Without a mechanism to coordinate transition from one provider to another, patients were at a risk of "falling through the cracks."

The 2011 addiction and mental health strategy recognizes that people with complex mental health and addiction problems often require specialized services from a variety of service sectors and stakeholders.[32] A priority of this strategic direction is to ensure people with complex service needs can access a full range of appropriate addiction and mental health services and supports. This includes an integrated system case management model where the individual's various services providers work together to meet the patient's needs.

In 2008 we also identified that service delivery expectations for public community mental health services were not standardized and not consistently followed by community mental health services staff. In most community mental health clinics the initial triage of new clients was done by qualified and experienced mental health professionals, but at some clinics this critical task was performed by administrative staff. Case management procedures around treatment planning, case conferencing, file closure, and post-discharge follow up differed across the province. Our review of treatment files showed the existing procedures were not always followed by community mental health clinic staff.

RECOMMENDATION 7: INTEGRATE MENTAL HEALTH SERVICE DELIVERY AND ELIMINATE GAPS IN SERVICE

We recommend that Alberta Health Services for its own community and hospital mental health and addictions services:

- work with physicians and other non-AHS providers to advance integrated care planning and use of interdisciplinary care teams where appropriate for clients with severe and persistent mental illness who need a comprehensive level of care
- improve availability of mental health resources at hospital emergency departments
- improve its system to monitor and ensure community mental health clinics comply with AHS's expectations for treatment planning and case management
- improve its process to identify and evaluate good operational practices used by local mental health and addictions staff, and deploy the best ones across the province

[31] Numbers provided by AHS; active CTOs as of March 31, 2014.

[32] *Creating Connections: Alberta's Addiction and Mental Health Strategy*, Strategic Direction 4.0 Address Complex Needs, page 27.

Criteria: the standards for our audit

AHS should have systems to:

- promote continuity and coordination of care on discharge, using a chronic disease management approach to addictions and mental health
- triage and intake mental health clients at points of access into the system
- provide mental health crisis intervention
- treat mental health clients in the community
- plan inpatient discharge to facilitate successful transition
- prepare hospital emergency rooms for mental health cases

Our audit findings

KEY FINDINGS

- Between the various publicly funded providers of mental health and addictions services, there is no integrated case management system for Albertans who are chronically mentally ill. AHS indicated that it does not have control over all key elements of the publicly funded healthcare system and lacks clear authority to deploy a provincial integrated case management mechanism. This may be a serious obstacle to improving the mental health system in Alberta and must be resolved. Broader provincial coordination around community housing was outside the scope of this follow-up audit.
- For its community and hospital mental health and addictions programs, AHS does not have an operational model for integrated case management. This model would clearly define:
  - which patients need an integrated care plan
  - who prepares the plan and where
  - how the care teams are to be organized and managed
  - who is responsible to help patients stay on an optimal care path
  - how patient outcomes are to be evaluated
- AHS has piloted promising innovative approaches in a number of communities to identify and provide focused coordinated treatment to small groups of patients with high care needs who consume significant AHS resources. These small scale projects have shown promising results but are very resource intensive. It isn't clear how they can be expanded under the current operating model.
- Critical gaps in service:
  - Emergency departments do not have access to patient information in the community mental health information systems, and many rural emergency departments do not have access to adequate mental health support at the point of care.
  - Family physicians and AHS do not have access to each other's health information systems and separately develop and implement their own treatment plans for the same patient. We are not making a recommendation to deal with this finding at this time. We intend to include this finding in subsequent audit work dealing with healthcare integration.
- Compliance with patient case management expectations at AHS community mental health clinics remains a problem in some areas.
- We observed a number of improvements and good frontline operational practices at individual service locations across the province. Some of these good practices we already noted in 2008. AHS needs to improve its process to identify and evaluate local good practices and deploy the best ones across the province.

Integration of addictions and mental health service delivery

AHS does not have an operational model for integrated case management for its community and hospital mental health and addictions programs. This model would clearly define:

- which patients need an integrated care plan
- who prepares the care plan and where
- how care teams are to be organized and managed
- who is responsible to help patients stay on an optimal care path
- how patient outcomes are to be evaluated

In a number of communities, AHS staff have piloted very promising innovative approaches to identify and provide focused coordinated treatment to small groups of patients with highest care needs and highest use of AHS resources. This is a step in the right direction, but it isn't clear how these can be expanded under the current operating model. The overall model of frontline delivery of addiction and mental health services in Alberta hasn't changed significantly, remains unintegrated and does not support seamless transition and integrated case management between different parts of the healthcare system.

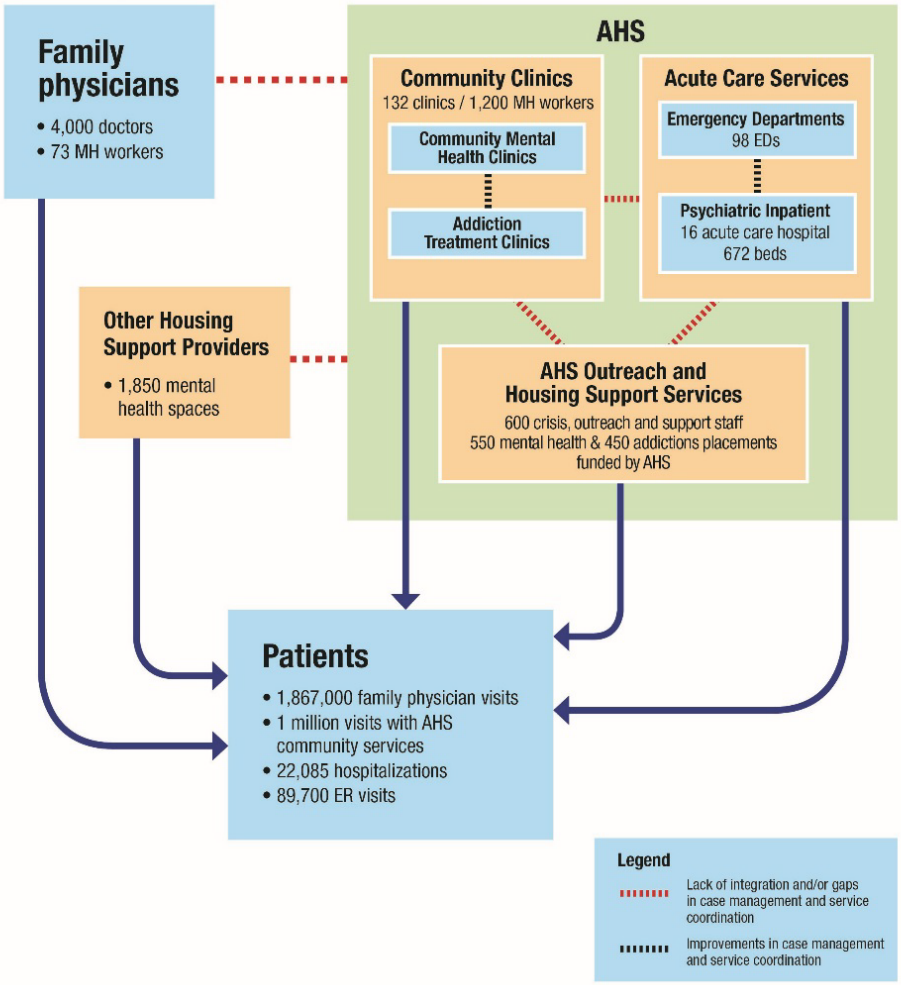
AHS made incremental improvements in a number of areas and increased its involvement on the boards of primary care networks. However, these changes have not resulted in a significant shift towards integration of care between hospital, community and primary care service providers for individual Albertans suffering from chronic mental illness and addictions.

AHS and other stakeholders recognize the benefits of integrating care and helping mental health and addictions patients navigate through the system. However, there is currently no process in place to do this. No one we talked to felt this could be accomplished under Alberta's current framework of publicly funded healthcare delivery.

The diagram on the following page shows the current level of integration of publicly funded mental health service delivery in the province.[33]

[33] This diagram is intended to provide a basic overview and does not depict every provider of services in the province, which includes various medical specialists, government ministries and not-for-profit organizations.

Publicly funded provincial addiction and mental health service delivery



Overall, there is very little joint care planning and service delivery among various healthcare providers. Individual care providers and programs continue to treat patients in isolation, often not knowing what services the patient is receiving from someone else. As a result, patients may end up with multiple care plans that are not connected. Care providers' access to each other's patient health records remains very limited across the public system; access is limited even between treatment programs that are part of AHS.

One notable improvement made by AHS was the consolidation of community mental health services with addictions services under the same management structure in 2009.[34] Although joint treatment planning and care delivery are not yet the norm across the province, we noted improvements in this area, particularly at locations where mental health therapists and addictions counsellors work in the same building or office.

[34] Before AHS was formed in 2009, community mental health services were provided by regional health authorities separately from addictions treatment services, which were provided by AADAC. Before 2009 there was no coordination of care between mental health and addiction service providers both at the management level and frontline treatment.

Critical gaps in service

While all the gaps identified in the diagram above are important, three areas are of particular significance.

Lack of mental health and addiction support in hospital emergency departments

In many communities, particularly in rural Alberta, hospital emergency departments have limited access to and support from mental health and addiction services. Emergency department staff at both rural and urban hospitals do not have access to patient information in community addiction and mental health information systems. Access to this information would help them evaluate and treat patients presenting with mental illness or addictions.

Emergency departments are one of the two main entry points into the healthcare system. It is the primary entry point for people in distress, including those with addiction and mental health problems. Our analysis of emergency department data shows that multiple emergency visits are a common trend among some patients with mental health and addiction problems. We identified a list of over 59,000 patients who visited emergency at least 89,700 times (4.2 per cent of all emergency department visits) in 2012–2013, for which a diagnosis was a mental disorder.[35] Of these individuals, over 13,800 patients visited an ER more than once, of whom more than 400 visited 10 times or more. The highest number of visits by one individual was 98. Over 11,400 visits were revisits for a mental disorder within 10 days of a previous visit to the emergency department. The number of mental health emergency department visits has been increasing at the rate of about 5 per cent per year over the past five years.[36]

Many people with mental illness who present at emergency departments do not have an acute care condition that warrants hospitalization. It is in the best interest of such patients to avoid hospitalization. This can be done safely for the patient through close coordination of care between emergency departments and community mental health and addiction service providers. Point of care support and access to mental health and addictions health records are vital.

Most emergency departments in larger urban centres have a mental health worker on site or on call seven days a week. Please see Appendix C for some examples we saw at hospitals we visited. In contrast, rural emergency departments may receive some on call support from therapists at the local community mental health clinic when it is open (usually weekdays from 8 a.m. to 4:30 p.m.). At all other times rural emergency department staff often have little or no access to mental health support. Medical staff at several rural emergency department sites we visited expressed frustration at this lack of access to adequate or dedicated mental health support, especially on weekends or early morning hours.

Emergency department staff at both urban and rural hospitals have no access to community mental health and addictions information systems. They cannot check whether a patient before them has a diagnosed mental illness, is a known suicide risk, has a history of violence, has a treatment plan, or whether there is a list of community caregivers to be contacted in an emergency. In other words, at this critical point, the healthcare system proceeds as if it doesn't know the patient.

Without access to information and coordination with community mental health service providers, an admitting physician may be faced with a choice to hospitalize the patient for safety reasons rather than for an acute medical condition.

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[35] Totals include ER visits for which one or more of the three main recorded diagnoses was a mental disorder.

[36] Alberta Health Services, System Level Performance Report for Addictions and Mental Health Services in Alberta 2012/13, page 22.

Lack of integration between AHS's community mental health and addiction programs and services provided by family physicians

Family physicians and AHS are two main providers of publicly funded mental health and addictions services in Alberta.

- Physicians—Together with hospital emergency departments, family physicians are another key point of entry into the healthcare system. Mental health and/or addiction concerns are raised in at least nine per cent of all visits to family physicians, and amount to about $121 million each year in physician billings to the Department of Health.[37] Each year, family physicians prepare and maintain about 125,000 care plans for Albertans with chronic illness,[38] and about 6,600 of these plans (billed by physicians at about $200 per plan) list mental illness as one of the underlying health conditions.[39]
- AHS—Of total base operating funding of about $10.5 billion[40] received from the department in 2013–2014, AHS spent about $700 million[41] on its mental health and addictions programs. AHS employs about 1,800 mental health and addictions staff across its 132 community clinics and a number of community support, outreach and crisis intervention programs. Each mental health therapist and addictions counsellor prepares their own treatment plan for the patient.

The 4,000 family physicians in the province and AHS's 1,800 community mental health and addictions staff have no access to each other's health information systems. They separately develop and implement their own treatment plans for the same patient. The health records and care plans do not follow patients as they go from one service provider to another.

The 42 primary care networks include over 3,000 family physicians and employ the equivalent of 73.6 full-time mental health workers (16.9 therapists, 37.4 behavioural consultants, 0.8 nurse, 3 psychiatric nurses, 0.6 occupational therapist, 3 social workers and 11.9 psychologists).[42] About 66 per cent of these resources are concentrated primarily at four primary care networks. Half of Alberta's 42 primary care networks have no mental health workers and seven others have less than one FTE.[43] Access to patient health data and direct involvement in joint planning and delivery of care to individual patients for AHS staff working at or visiting primary care network clinics is limited to those sites.

The Department of Health has the overall responsibility and authority to directly engage family physicians. AHS management has indicated that its role and authority in this area are limited. Engagement of physicians is critical for integration of healthcare service delivery in Alberta and any challenges in this area must be resolved. We are not making a recommendation at this time, because we intend to examine this area in a broader system-wide context.

Lack of coordinated approach to community housing supports for people with mental illness

AHS's ability to successfully treat mental health and addictions patients in the community depends heavily on the availability and effectiveness of community housing supports. We provide a separate recommendation for this important area later in this report.

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37 Based on our analysis of data provided by the department.

38 See *Report of the Auditor General of Alberta–September 2014* (Chronic Disease Management), pages 25 to 31 for a description of care plans.

39 Based on our analysis of the fee for service claims data provided by the department.

40 Ministry of Health Annual Report 2013/14, page 75, http://www.health.alberta.ca/newsroom/pub-annual-reports.html

41 Based on information provided by AHS; amount shown is net of revenue.

42 Sixty-eight of these mental health workers are AHS employees. AHS recruits and employs these workers on behalf of the PCNs but their wages are covered by PCN funding while they work at network clinics.

43 Based on our analysis of data provided in PCN 2013–2014 annual reports of actual full time equivalents.

Continuing lack of compliance with case management expectations at AHS community mental health clinics

AHS has improved consistency of service delivery expectations at its community clinics, but staff compliance with expectations around patient case management remains a problem. AHS does not have a formal mechanism to monitor and ensure compliance.

AHS does not currently have a common set of standard practices for planning and delivering treatment at its mental health and addictions clinics. Some zones have developed their own, while others continue to use legacy procedures which predate AHS. Standards for case management in community clinics settings should be the same across the province to ensure consistency in expectations of how patients are to be treated and how their clinical information is recorded.

We reviewed 251 patient files at 10 community mental health clinics across five zones of AHS and at mental health outpatient clinics in three acute care hospitals. We found compliance with existing case management expectations at community clinics remains a problem, specifically in such areas as case conferencing with other care providers, involvement of patients in care planning, documentation of treatment progress, post discharge follow up and analysis of treatment. Compliance oversight is done through periodic file reviews by frontline managers and supervisors, and for the most part remains informal.

See Appendix B for examples of current differences in case management expectations across the province and a summary of our file review findings.

We did not review patient care planning documentation at family physician offices.

Improve the processes to identify and evaluate good frontline operational practices for province-wide implementation

We observed a number of improvements and good practices at individual service locations across the province. Some of these were a result of a centralized corporate effort by AHS while others were driven mainly by the initiative of local AHS staff. Some of these initiatives and good practices are new, while others we previously noted in our 2008 report.

For example, Calgary's Access Mental Health is a centralized point of access/intake that makes appointments for 85 per cent of that city's adult mental health programs. This mechanism provides a single point of access for all major community mental health services, with the exception of several specialty programs. Central intake coordinators assess patient needs and direct them to the most appropriate service.

In a much more basic example of a good practice, one community mental health clinic found that phoning patients to remind them about upcoming appointments helped reduce the number of no-shows, which in turn reduced wait times and improved the use of therapists' time. This simple step is not a standard practice across all AHS clinics, even though its benefits are clear and it is a practice routinely used in a variety of settings such as dental and veterinary clinics.

We did not see any evidence that AHS currently has a process to formally identify and evaluate these good local frontline operational practices and deploy the best ones provincially. Rather than developing a new process, AHS feels its existing Addiction and Mental Health Strategic Clinical Network can be used to do this.[44] In order to be successful the strategic clinical network will have to evaluate and

[44] For more information on this SCN see http://www.albertahealthservices.ca/7698.asp.

communicate information about already existing and new local best practices to other care providers in a timely and efficient manner.

Please see Appendix C for more examples of good practices and improvements we observed. These represent important opportunities for AHS to improve quality of care and patient outcomes, and better manage costs.

Implications and risks if recommendation not implemented

Without integrated service delivery, coordinated care planning and service providers acting as one team, the healthcare system may not meet the needs of mental health and addictions patients. The needs of patients at rural emergency departments may also not be met if they cannot receive a level of support and assessment comparable to that offered in larger urban centres.

Clinical information management in mental health and addictions

Background

Integration of health information is essential for successful coordination of health service delivery across the continuum of care. Clinical information captured by mental health and addictions service providers is an important part of a patient's overall health record.

Mental health and addictions patients move between service providers and between hospital and community settings. Their health information, including their care plan and treatment history, should move with them and be available at point of care. Both providers and patients should be able to access and contribute to the health record.

All care providers generate health information on their patients – mental health therapists, addictions counsellors, community support workers, crisis teams, family physicians, emergency departments and acute care units at hospitals. They all need access to the relevant information to provide the right treatment at the right time. For example, if an emergency department nurse had access to the patient's community treatment file, including a care plan and a list of community care providers, this would help provide the most appropriate care and could help avoid hospitalization.

In 2008 we found that mental health information systems in Alberta were not integrated. Health regions were developing IT solutions that were redundant and incompatible. There was virtually no health information flow between or within regions. Information flow between community and hospital settings was often restricted to communications by fax. Hospitals couldn't share information even when they were located in the same community or were using the same software. Information sharing between community service providers was not much better.

Confidentiality, privacy and security of health information is an important risk, but it is a risk that can be managed. As with a paper health record, there must be proper security measures in place and providers should have access based on what they need to know to care for their patients. However, it would be wrong to use confidentiality and privacy as an excuse not to share health information where it could significantly improve quality of care, patient outcomes, performance measurement and accountability of healthcare providers.

The department and AHS are jointly considering the acquisition or development of a unified central clinical information system (CIS). In the fall of 2014, we were told that a request for proposals for a CIS solution would be issued in 2015. AHS estimates the cost of this system, if implementation begins in

2015 or 2016, would be $1 billion over the six year roll-out period. A further estimated $500 million would be required to deploy the CIS's electronic medical records (EMR) module into physician offices in the community.

In 2009 AHS began introducing a treatment outcome measurement tool for mental health clients in a variety of its clinical programs.[45] At a minimum, an assessment using this tool should be done at the beginning and end of each treatment program a patient is enrolled in. Comparing pre- and post-assessment scores for each patient helps the therapist evaluate the success of the treatment and degree of improvement in key functional areas.

RECOMMENDATION 8: IMPROVE INFORMATION MANAGEMENT IN MENTAL HEALTH AND ADDICTIONS

We recommend that Alberta Health Services make the best use of its current mental health and addictions information systems by:

- providing authorized healthcare workers within all AHS sites access to AHS mental health and addictions clinical information systems
- strengthening information management support for its mental health treatment outcomes measurement tools

Criteria: the standards for our audit

- Mental health information systems should make summary information available to staff who need it.
- Information systems should capture data completely, accurately and on a timely basis.

Our audit findings

KEY FINDINGS

- Mental health information systems remain incompatible, are outdated and do not support integrated care delivery. AHS has not proceeded with developing specialized mental health information management systems because it is developing a central clinical information system—a province-wide health information management solution that would serve all clinical areas.
- While the unified central health information system may take five to ten years to materialize, AHS does not have a process to identify opportunities to integrate care through better use of existing mental health and addictions information systems.
- The process for capturing data for AHS's clinical outcome measurement process is inefficient and does not support timely and complete data entry and analysis.

Mental health information systems remain incompatible and outdated

Information management systems for inpatient and community mental health and addictions services remain incompatible. Various incompatible legacy systems that AHS inherited from the health regions are still in use. This does not support integration of addiction and mental health services across the continuum of care.[46] This also results in inconsistent data capture and a lack of standard data

[45] Health of the Nations Outcome Scale was developed by the British Royal College of Psychiatrists in the mid-1990s to help measure the health and social functioning of people with severe mental illness. It consists of 12 individual categories, each one measuring a type of problem commonly presented by clients with mental illness. Clinical staff score these on a scale from 0 to 4, 0 indicates no problem and 4 indicates a severe problem. A completed HoNOS score sheet provides a profile of 12 severity ratings and a total score for the client at that point in time. At a minimum an assessment is done at the beginning and end of a particular course of treatment; comparing these scores helps clinicians determine outcome measures for the patient in these 12 areas from the provided treatment. HoNOS is the most widely used routine clinical outcome measure tool used by mental health services in the UK; it is also used in New Zealand, Australia and Canada. See https://www.rcpsych.ac.uk/clinicalservicestandards/honos.aspx.

[46] This includes the ability to integrate client information with the appropriate clinical decision support tools at the point of care; linking client/patient care between inpatient and community settings, as well as between various healthcare providers in the community.

definitions, which hampers AHS's ability to monitor and benchmark performance at the zone, program and individual healthcare provider levels.

The current information management environment presents a number of challenges:

- Some of the mental health and addiction information systems are rapidly becoming technologically obsolete, which makes them difficult to maintain and increases risk of failure.
- The current mix of electronic and paper systems does not support integration of care across the continuum, including healthcare provider access to a patient's records at the point of care, and the ability to allow patients and their families to look at and contribute to their health record.
- Without access to clinical information systems, care providers often rely on patients for information on prior assessments and treatments, which poses a risk when dealing with people who suffer from a mental health disorder. Inability to view and safely share information with other care providers, such as suicide risk and medication reactions, can result in serious harm to the patient and others. Healthcare providers need to know in a timely manner what treatments were tried in the past to avoid interventions that are ineffective and could harm the patient.
- Patients and their families complain that they have to repeat the same information and answer the same questions every time they contact a healthcare system. This is not just a matter of inconvenience for a patient who is already in distress. Rather, this is an indication that a system does not know the patient, does not manage his or her care across the continuum and that care providers are not working together as a team. Redundant collection of information also wastes time that should be spent treating patients.

Many frontline staff we talked to expressed frustration with the status quo and raised concerns similar to those noted above.

AHS's work on developing a single provincial clinical information system is in the early design stages. We are not able to assess whether it will meet the needs of care providers and support integration of mental health and addiction services across the continuum of care. While AHS is working on this long-term solution, which could take anywhere between five and ten years to materialize, healthcare providers must continue to rely on clinical information systems that are currently in place.

No short-term plan to make better use of existing clinical information systems

AHS does not have a process to identify opportunities to integrate care through better use of existing clinical information systems. The cost of acting on such opportunities needs to be considered in relation to the benefits they offer to patients. In some cases, significant improvement may be accomplished without extensive IT development effort.

At its creation in 2009 AHS inherited various legacy mental health and addictions information systems. At the same time, employees of health regions became employees of AHS, which removed many barriers to the flow of health information. Despite the transition to a single organization, AHS staff continue to have limited access to a patient's health information.

For example, mental health workers and addictions counsellors do not have access to each other's information systems, even though about half of all people with mental illness have a concurrent drug or alcohol addiction. Addictions counsellors and community mental health clinic therapists are now employees of AHS and there should be no legal barriers to sharing information. Other examples include information access in hospital emergency departments and primary care, as discussed in detail under the previous recommendation.

Another potential opportunity would be to provide access to specific mental health information through Netcare.[47] Such information could include alerts for suicide risk and violent behaviour, diagnoses, treatment plans (if available), and care providers to be contacted in crisis. Family physicians and hospital emergency departments already have access to Netcare.

Process to support collection and analysis of clinical outcomes data

The current initiative to introduce standardized outcomes measurement may be hindered because AHS does not have an efficient system to collect, enter and process the patient assessment data gathered by individual clinicians. The current system is paper based and the assessment results for every patient are entered twice. First, clinicians record their patient assessments on paper, which is collected and stored at their local clinic until someone has the time to enter it. Second, each zone transfers the data from paper to an electronic database. Program staff complained that the paper process is cumbersome, does not support an easy, timely and complete data capture and causes data entry backlogs. We found that the required assessments are not always done, particularly the post-treatment assessments. Without timely electronic data entry, local managers cannot effectively monitor and ensure clinician compliance with outcome measurement requirements.

Implications and risks if recommendation not implemented

If care providers do not have timely access to relevant health information at the point of care, they may not be able to meet the care needs of their patients and help them stay on the right care path.

Lack of effective clinical information management compromises AHS's ability to evaluate patient outcomes, assess performance of care providers, and direct resources to treatments and programs that are best for the patients.

Supportive living and home care services for mental health and addictions

Background

Availability of an appropriate and supportive living environment is not a nice-to-have, but a prerequisite for successful treatment and management of mental illness and addictions in the community. It is also a key consideration in deciding whether a patient can be safely discharged from the hospital. Housing support needs cover the entire spectrum from in-home supports for relatively high functioning individuals to secure facility living for people with severe mental illness.

When we talk about providing mental health and addictions patients with housing supports in the community, we do not imply that AHS needs to be in the business of building and operating mental health housing. AHS can do this by supporting patients in existing community placements, whether in the patient's apartment or family home, or in a group home operated by a community agency. AHS is

[47] Alberta Netcare is a provincial electronic health record system. Various healthcare providers submit key patient health information to Netcare which is combined into a single integrated patient record which can be accessed by authorized healthcare providers through a secure internet connection. Netcare does not provide a patient's full medical record, but includes information such as laboratory test results, diagnostic images and reports, hospital visits, surgeries, drug alerts and immunizations. See http://www.albertanetcare.ca/InfoForAlbertans.htm for more information about Netcare.

not in the business of managing infrastructure[48]—it is in the business of providing healthcare services to Albertans in settings that are best for them.

Many government and non-government organizations are involved in providing mental health and addictions services to Albertans who live with mental illness and addictions in the community. However, AHS is responsible for delivering healthcare services to Albertans in a setting that is best for the patient, including their own home. Of all these organizations, AHS has by far the strongest inherent interest in making sure that Albertans have access to appropriate services that make their home a safe and supportive living environment.

Much of the support that patients need to function in the community and stay healthy does not require complicated therapeutic interventions. In some cases, all it takes to keep a patient on the right care path, and away from the hospital, is for someone to visit their home once or twice a week and help with some basic activities of daily living. For example, even patients with serious mental illness can successfully function in the community if somebody periodically comes over to talk to them, helps them schedule appointments, reminds them to fill their prescriptions and take their medications, helps them make better food choices and alerts other treatment providers to the earliest signs of them going into crisis.

The idea of supporting Albertans in their own homes as a key to their treatment success in the community is not new and is not unique to mental health. For example, AHS's continuing care program for seniors effectively stimulates the supply of supportive living and home care services by contracting private service providers to offer support services to Albertans in residential settings.[49] AHS's home care staff offer a variety of support services directly in patients' homes, or AHS contracts third party providers to do this work. In other words, under the continuing care model, AHS takes a strong lead in deciding what services are needed and where, controls the waitlist and the patient placement process, and directly manages the supply of community housing supports through contracts with care providers.

In 2008 we reported that there was no coordinated approach to manage community housing support services for people with mental illness in Alberta. There was no provincial system to analyze and manage gaps between supply and demand for mental health housing services. Formal coordinated placement mechanisms for mental health housing existed only in a handful of communities. Community support and crisis intervention services were a patchwork of programs and initiatives across the province that were developed in isolation without coordinated provincial direction and support.

As a result, patients and families often had to navigate the system on their own when trying to find the right place to live in the community. Mental health workers who were trying to help were only in a marginally better position, having to rely mainly on their personal connections with housing resources in the community. The same situation often applied to mental health patients who needed an appropriate housing option lined up before they could be discharged from a hospital.

There are a number of recent provincial and local initiatives which aim to end homelessness or provide appropriate housing for Albertans.[50] These initiatives are funded by various levels of government. While

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[48] The only notable exception where AHS owns some housing infrastructure is in long-term care. The long-term care facilities owned by AHS are mainly small rural auxiliary hospitals that were converted for long-term care use.

[49] See the *Report of the Auditor General of Alberta—October 2014* follow-up audit report on Seniors Care in Long-term Care Facilities, pages 71-103.

[50] These include "A Plan for Alberta-Ending Homelessness in 10 years" http://humanservices.alberta.ca/documents/PlanForAB_Secretariat_final.pdf and Edmonton Homeward Trust http://www.homewardtrust.ca/home.php

none of these initiatives are specifically directed at people with mental illness or addiction, a sizeable percentage of their target populations have a mental health condition. AHS was part of a cross ministry working group[51] which developed an Addiction and Mental Health Housing and Supports Framework.[52] This document was intended to provide:

- a consensus on the range of housing options and community services needed for this population
- a snapshot of the inventory and capacity of existing housing options and services in Alberta for the different populations with mental illness and addictions and an analysis of gaps and barriers associated with these options
- recommendations to deal with identified concerns around housing capacity, access and client needs

This framework, and an accompanying implementation plan, has now been sent to the InterAgency Council on Housing and Homelessness.[53] It will be considered as part of an Integrated Housing and Supports Framework for Alberta, which is being developed for all affected populations, including those with mental health and addictions. AHS is one of the council partners.

During our 2011 progress report we noted that AHS was working to compile an inventory of community placement options that can meet the needs of Albertans with mental illness and addictions.

RECOMMENDATION 9: COMPLETE ASSESSMENT AND DEVELOP WAITLIST SYSTEM FOR ALBERTANS WHO NEED COMMUNITY HOUSING SUPPORTS

We recommend that Alberta Health Services in supporting the work of the cross-ministry housing planning team established under the mandate of the Minister of Seniors:

- complete its assessment and report on gaps between supply and demand for specialized community housing support services for mental health and addictions in the province
- develop a waitlist management system to formally assess the housing support needs of AHS's mental health hospital and community patients and coordinate their placement into specialized community spaces funded by AHS

Criteria: the standards for our audit

- AHS should have systems to determine the supply and demand for housing supports for people with mental illness
- AHS should collaborate with service providers to develop mental health housing support services.
- There should be systems to link people with mental illness with support services and appropriate community placements.

[51] This also included representation from Human Services, Alberta Health and Municipal Affairs.
[52] This was one of the projects associated to implementing the *Strategy* (specifically Strategic Direction #3.0, Enhance Community-based Services, Capacity and Supports).
[53] http://humanservices.alberta.ca/homelessness/16051.html

Our audit findings

KEY FINDINGS

- Although much was done since 2008 to develop a provincial housing framework and improve cross-entity coordination, there has been no significant change in the frontline delivery of housing support services for people with mental illness. It remains largely uncoordinated. While we noted several good practices, in many parts of the province patients, their families, and individual care providers must navigate the system on their own to find the right housing placement and the right level of support.
- The gap analysis for community mental health housing supports is not complete, although AHS expects to finish it later in 2015. A much greater concern is that it is not clear who will fill these gaps for AHS's hospital and community mental health patients. AHS indicated it does not have a clear responsibility for mental health housing support delivery, as there are numerous other government entities involved in this area. This may be a serious obstacle to improving the mental health system in Alberta and must be resolved. Broader provincial coordination around community housing was outside the scope of this follow-up audit.
- AHS does not have a formal mechanism to coordinate placement of its community and hospital patients with the appropriate housing support services and the 550 mental health community spaces it funds directly.
- AHS does not have a formal instrument to assess the community housing support needs of its mental health and addiction patients
- In most parts of the province, AHS does not maintain waitlists and has no formal placement process for its community and hospital patients who require mental health housing supports to function in the community
- AHS often does not control the placement of patients into mental health community spaces it funds through contracts with community service providers.
- We observed a number of improvements and good practices in frontline operations that were mainly driven by the initiative of local staff and community service providers. AHS needs to improve its process to formally identify, assess and deploy these good practices to other parts of the province.

Lack of change in frontline delivery of community housing support services for mental health and addictions

AHS is involved in a number of high level initiatives with other government and non-government organizations to develop a provincial framework for community housing, and to better coordinate efforts in this area. However, much of this work remains either in conceptual development or at such a high level that its impact has not had significant impact at the front line. Aside from a number of successes in some communities, the delivery of housing support services remains uncoordinated for mental health and addiction patients waiting to be discharged from hospitals, or for those treated by AHS in the community.

If mental health and addictions patients do not have a safe home environment that meets their needs and supports their treatment objectives in the community, therapeutic interventions provided by healthcare workers at hospitals and in the community are likely to fail in the long run. When community supports fail, mental health patients end up in hospital emergency departments and inpatient units again and again.

Without properly supported options lined up, it may be unsafe for a hospital to discharge mental health and addictions patients into the community. As a result, patients may be hospitalized without an acute health condition. Although Canadians hospitalized with mental health illness are less than one per cent

of the total population, they represent 12 per cent of all hospitalizations, and account for 25 per cent of all hospital bed days.[54]

Patients hospitalized for a few weeks or more are at risk of losing their current placements in the community, which makes it even more difficult to discharge them from hospital. Based on delayed discharge data compiled by AHS for 2012–2013, there were over 2,900 mental health patients whose hospital discharge was delayed, representing over 109,000 hospital bed days and accounting for 22 per cent of all available psychiatric beds during the period. Waiting for a facility placement or connection with a community resource were major reasons for discharge delays.

On the community side, AHS does not centrally track how many of its mental health and addictions patients require some form of housing support.

With intensive inpatient treatment, over 80 per cent of mental health and addictions patients show significant improvement by the time they are discharged from the hospital.[55] If community housing supports fail upon discharge, all previous therapeutic investment and success can be quickly lost as patients relapse and end up back in the emergency department. Across Alberta, the 30-day unplanned readmission rate for mental health was about 10 per cent in 2012–2013. Almost 20 per cent of people with primary mental health diagnosis were back in the emergency department within 30 days of leaving the hospital.[56]

This revolving door cycle harms the patient, wastes resources and is extremely demoralizing to the frontline healthcare providers. AHS cannot afford to take a passive role on community housing supports for people with mental illness.

Lack of process to manage gaps in supply and demand for community housing support services

AHS continues to work on an assessment of gaps between supply and demand for mental health and addictions housing supports. AHS indicated the assessment will be finished later in 2015. It will provide a comprehensive assessment of mental health and addictions housing needs by community, number of spaces and support level required.

The key point we raise is that it is not clear who will fill gaps in mental health housing that AHS may identify, and how. AHS indicated that it does not have a central system to develop and manage housing supports for mental health and addictions because it does not have a clear responsibility and mandate over this area. Because other government organizations have a mandate over various aspects of community housing, AHS maintains it does not have the authority to lead or direct work to ensure a sufficient supply of mental health and addictions placements and housing supports in the community. While this may be a serious obstacle to improving the mental health system in Alberta and must be resolved, broader provincial coordination around community housing was outside the scope of this audit.

In other words, the situation has not fundamentally changed since 2008. AHS zone staff continue to manage existing contracts for available community mental health housing placements, figure out what housing options are needed and where, and do their best to convince private housing providers to offer spaces for people with mental illness. In every zone we visited, housing supports and community

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[54] Alberta Health Services, System Level Performance Report for Addictions and Mental Health Services in Alberta 2012/13, page 71.
[55] Ibid, page 79.
[56] Ibid, pages 99-103.

placements for mental health and addictions were in short supply and AHS staff we interviewed expressed frustration with the current situation.

AHS does not maintain a provincial inventory of available mental health placements in the community. A province-wide inventory was compiled in 2012 (supply side only) but this has not been updated since then.

Lack of coordinated placement and waitlist management

AHS does not have a formal mechanism to coordinate placement of its community and hospital patients with the appropriate housing support services available in the 550 mental health community spaces it funds directly. AHS indicated that it often does not have control over patient placement into housing spaces that it contracts and funds directly. Coordinating patient placement with independent community providers is even a greater challenge.

AHS has not formally adopted an assessment tool to determine the housing support needs of individuals with mental illness and addictions. This is a contrast to the internationally validated care needs assessment instrument[57] used by AHS in its continuing care program. For seniors and Albertans with various disabilities, AHS uses this internationally validated instrument to assess their functional needs and determine the level of support each patient requires. In continuing care, this helps local management make placement decisions based on the relative support needs of each patient. By contrast, in mental health and addictions, finding a community placement for the patient is based almost exclusively on persistence and the advocacy skills of their family and care providers.

Locally and centrally, AHS does not maintain a comprehensive waitlist of people who need mental health housing. Individual mental health workers in the community and in hospitals often rely on their own relationships with community housing providers to find placements for their patients. They often do so independently and in competition with their colleagues. The only exception we saw was in Calgary, where a web-based centralized referral and booking system is used to manage placement into specialized community housing funded by AHS. All housing referrals are directed through one central intake coordinator, who assesses each client and places them on waiting lists for a suitable contracted site.[58] Each site notifies the coordinator as vacancies arise, who in turn provides the facility operator with the contact information of the next suitable candidate; once housed, the individual is removed from all waiting lists.[59] The coordinator regularly monitors all waiting lists and provides updates to referring sources and clients as needed.

AHS zones periodically generate statistics on delayed discharges from hospitals, but this information is used mainly for aggregate reporting and is not used to manage placement of individual patients.[60] No similar data is reported for patients cared for in the community.

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57 For more information on interRAI, see http://www.interrai.org/.

58 If the coordinator feels an individual is not a suitable candidate for AHS contracted housing, they will provide the referring source with other housing options available in Calgary such as the Calgary Homeless Foundation, Mustard Seed, Calgary Housing, etc.

59 Most sites will do their own secondary intake with a prospective client to ensure they are a good fit for that location. This is especially true in group home type settings where operators want to be sure newcomers don't upset any existing dynamics and harmonies.

60 Alberta Health Services, *System Level Performance Report for Addictions and Mental Health Services in Alberta* 2012/13, pages 60-69.

Adoption of good practices

We observed a number of improvements and good practices in frontline operations such as Calgary's web-based centralized referral and booking system. Although AHS improved communication and provincial coordination of community mental health support services after it took over from the health regions, it needs to improve its process to formally identify and assess local good practices, and deploy the best ones across the province as we note in our findings under integration of provincial addiction and mental health service delivery, starting on page 69. See Appendix C for a list of improvements and good practices we observed.

Implications and risks if recommendation not implemented

If patients with serious mental health and addictions problems do not receive appropriate housing supports, any treatment success gained in the hospital or community will be jeopardized.

Appendix A

RECOMMENDATIONS FROM ORIGINAL 2008 REPORTS

Recommendations from our April 2008 report

RECOMMENDATION 3: IMPLEMENTATION SYSTEMS[61]

We recommend that the Alberta Mental Health Board and the Department of Health, working with other mental health participants, strengthen implementation of the Provincial Mental Health Plan by improving:

- implementation planning
- the monitoring and reporting of implementation activities against implementation plans
- the system to adjust the plan and implementation initiatives in response to changing circumstances

RECOMMENDATION 4: ACCOUNTABILITY FRAMEWORK[62]

We recommend that the Department of Health ensure there is a complete accountability framework for the Provincial Mental Health Plan and mental health services in Alberta.

Recommendations from our October 2008 report

RECOMMENDATION 16: MENTAL HEALTH STANDARDS[63]

We recommend that the Department of Health and Alberta Health Services create provincial standards for mental health services in Alberta.

RECOMMENDATION 17: HOUSING AND SUPPORTIVE LIVING[64]

We recommend that Alberta Health Services encourage mental health housing development and provide supportive living programs so mental health clients can recover in the community.

RECOMMENDATION 18: CLIENTS WITH CONCURRENT DISORDERS[65]

We recommend that Alberta Health Services strengthen integrated treatment for clients with severe concurrent disorders (mental health issues combined with addiction issues).

RECOMMENDATION (FIRST UNNUMBERED): RELATIONSHIPS WITH NOT-FOR-PROFIT ORGANIZATIONS[66]

We recommend that Alberta Health Services improve relationships with not-for-profit organizations to provide better coordinated service delivery.

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61 *Report of the Auditor General of Alberta—April 2008*, page 72.
62 *Report of the Auditor General of Alberta—April 2008*, page 77.
63 *Report of the Auditor General of Alberta—October 2008*, page 162.
64 *Report of the Auditor General of Alberta—October 2008*, page 164.
65 *Report of the Auditor General of Alberta—October 2008*, page 168.
66 *Report of the Auditor General of Alberta—October 2008*, page 169.

Recommendations from our October 2008 report (cont'd.)

RECOMMENDATION 19: OPPORTUNITIES TO REDUCE GAPS IN SERVICE[67]

We recommend that Alberta Health Services reduce gaps in mental health delivery services by enhancing:

- mental health professionals at points of entry to the system
- coordinated intake
- specialized programs in medium-sized cities
- transition management between hospital and community care

RECOMMENDATION (SECOND UNNUMBERED): PROVINCIAL COORDINATION[68]

We recommend that Alberta Health Services coordinate mental health service delivery across the province better by:

- strengthening inter-regional coordination
- implementing standard information systems and data sets for mental health
- implementing common operating procedures
- collecting and analyzing data for evidence-based evaluation of mental health programs

RECOMMENDATION (THIRD UNNUMBERED): IMPROVING COMMUNITY-BASED SERVICE DELIVERY[69]

We recommend that Alberta Health Services strengthen service delivery for mental health clients at regional clinics by improving:

- wait time management
- treatment plans, agreed with the client
- progress notes
- case conferencing
- file closure
- timely data capture on information systems
- client follow up and analysis of recovery

RECOMMENDATION (FOURTH UNNUMBERED): FUNDING, PLANNING AND REPORTING[70]

We recommend that the Department of Health and Alberta Health Services ensure the funding, planning and reporting of mental health services supports the transformation outlined in the Provincial Mental Health Plan as well as system accountability.

RECOMMENDATION (FIFTH UNNUMBERED): ABORIGINAL AND SUICIDE PRIORITIES[71]

We recommend that the Department of Health and Alberta Health Services consider whether the implementation priority for aboriginal and suicide issues is appropriate for the next provincial strategic mental health plan.

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67 *Report of the Auditor General of Alberta—October 2008*, page 171.
68 *Report of the Auditor General of Alberta—October 2008*, page 176.
69 *Report of the Auditor General of Alberta—October 2008*, page 181.
70 *Report of the Auditor General of Alberta—October 2008,* page 186.
71 *Report of the Auditor General of Alberta—October 2008,* page 190.

Appendix B

CONSISTENCY AND COMPLIANCE WITH CASE MANAGEMENT EXPECTATIONS AT AHS'S COMMUNITY MENTAL HEALTH CLINICS

AHS does not currently have common patient file documentation standards in place for its mental health clinics. Rather, individual zones are responsible for developing and implementing these. This leads to a variety of inconsistent practices across the province.

Examples are:

- Case conferencing.[72] All zones require this to be done, although practices around which cases should be conferenced, when, who should be present and how it should be documented in the file vary from zone to zone and also between clinics in zones.
- Contact (or progress) notes. These are an important part of any file and provide a documented chronological summary of a client's treatment progress. While all zones have similar requirements around what type of information should be captured in these notes[73] the time required to have these completed and placed on a patient's file varies between zones. Some zones mandate this be done within two business days of each contact, others a week.
- File closure. Some zones require automatic closure after three months of non-contact with a client. One clinic we visited follows a "three strike rule"; if a client does not show up for three consecutive appointments, despite attempts by their assigned therapist to contact them, the file is closed. All zones do require some sort of closure summary or note be placed on a file regardless of when or why it is closed but what summary information should be documented in the files varies between zones.

[72] Case conferencing is a common yet important clinical procedure where therapists in a clinic or a specific program gather at predetermined times to discuss selected cases and get peer feedback and consensus on proposed treatment. If treatment does not produce expected results, a case can be conferenced, or presented, again to get feedback from peers on alternative approaches.

[73] This includes such details as date of contact, who was present, location, how contact was made (in person or by phone), and a full description of what occurred including focus of the session, observed mental state, any changes in the client's situation, progress being made or any changes to an agreed treatment plan, date of next appointment, etc.

File review results

Treatment plans,[74] agreed with the client	Found in 78 per cent of applicable files
Case conferencing	Full and complete documented evidence found in 39 per cent of applicable files. Documentation in the remaining files was either partially completed or missing. The most prevalent shortcomings noted around insufficient documentation were: • Where there was a case conference or equivalent form in the file it was not filled out completely. • Where summary information was documented, there was no outcome relevant to consensus reached about the client's treatment plan.
Progress notes	Full and complete progress notes found in 89 per cent of applicable files.
Timely data capture	Noted in 98 per cent of files.
File closure (form)	82 per cent of applicable files contained required file closure documentation.
Analysis of treatment	Full and complete documentation prepared at the end of a course of treatment analysing whether it helped the client recover was found in 66 per cent of applicable files.

These results show AHS has work to do to improve its case management oversight and review processes to ensure compliance with file documentation standards.

[74] This should include descriptions of proposed therapy, frequency of visits, expected duration of treatment and documentation it has been discussed and agreed to with the client. Referred to as an assessment in some zones.

Appendix C

GOOD PRACTICES NOTED BY THE OAG DURING THIS MENTAL HEALTH FOLLOW-UP SYSTEMS AUDIT

Mental health and addiction support in hospital emergency departments

Some examples we saw at hospitals we visited:

- The Royal Alexandra hospital now has an embedded mental health nursing team in its emergency department, which is staffed 24/7 and has six dedicated beds. This team takes over patient care for any individual assessed by the triage nurse as having primarily mental health or addiction symptoms. It will also make any necessary follow-up appointments for the patient with outpatient and community resources. Team staff also phone patients within 24 hours of discharge to check on their status.
- At the Foothills Medical Centre, a team of mental health professionals are located in an office beside the emergency department and has five dedicated treatment rooms. Available seven days a week from 7 a.m. to 2 a.m., staff provide support and advice to emergency department medical staff and make referrals to community or outpatient programs as needed.
- The Red Deer Regional Hospital is supported by a mental health therapist from the Crisis Response Team based out of the community mental health clinic who will respond to the ER when requested by medical staff. Available seven days a week from 8 a.m. to 11 p.m., the therapist will also make referrals and appointments for the patient with necessary mental health or addiction programs.

Common operating procedures

AHS has developed and implemented a number of common province wide operating standards and procedures in some areas of adult mental health, with more continuing in development. Addictions and mental health has a dedicated policy development manager who is responsible for leading this process.

Some examples of these are:

- A new suicide risk management policy suite (2011) to standardize this process across all acute inpatient psychiatric units; consists of three policies and seven related procedures.[75]
- Revised policies and procedures for staff who provide mental health services to inmates in provincial correctional facilities. This includes who should conduct a screening and risk assessment for suicide and when and what procedures should be followed for those patients identified as being suicidal or mentally unstable.
- A new procedure for protocols around restraining adult psychiatric unit patients during behavioural emergencies has been drafted and is in the final stages of review before going to senior management for approval and roll out.

Shared Care Mental Health

In the Calgary zone, AHS has greatly expanded Shared Care Mental Health.[76] The adult side of this program is supported by twelve mental health clinicians and thirteen psychiatrists. An AHS mental health clinician will attend at a doctor's practice[77] to assess and provide treatment to an individual patient. The doctor is also present during each session, interacting where necessary and appropriate. The intent of the program is to help doctors become more comfortable and experienced in dealing with mental illness so they can deal with patients' concerns rather than immediately referring them to a community clinic.

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[75] Mental Health Observation Policy (one procedure), Suicide Risk Assessment and Management Policy (three procedures) and Mental Health Safety Precautions Policy (three procedures).

[76] http://www.albertahealthservices.ca/services.asp?pid=service&rid=1009052

[77] This can be a private stand-alone practice or the doctor could be part of a Primary Care Network.

The manager who oversees this program told us that there are currently 750 participating doctors in Calgary, with a waiting list of 80.

Partnerships with Primary Care Networks

AHS also partners with a number of Primary Care Networks (PCNs) throughout the province to enhance mental health treatment available to these patients at these primary care clinics. This is done through the Behavioural Health Consultation service which is intended to support patients whose behavioural and mental health concerns[78] can be resolved through short-term treatment. Patients are given access to brief (up to 30 minutes) and frequent (typically four to six) therapy sessions with a qualified mental health clinician to help them either resolve their concerns or develop long-term coping strategies. If the doctor and mental health clinician feel the patient requires additional or ongoing therapy not available at the PCN they will be referred to the appropriate community mental health clinic or other AHS program.

Some PCNs have funding in place to hire mental health clinicians and use this money to cost-share with AHS to recruit and staff the Behavioural Health Consultation service. These clinicians are AHS employees but their salaries are covered from PCN budgets and they work full time in PCN clinics. In Calgary there are currently 45 clinicians working under this model at five of the area's seven PCNs; it is also currently being utilized at two PCNs in the Edmonton zone and 15 clinics associated to the Chinook PCN (which serves Lethbridge and area in the south zone).

Central zone offers similar mental health support to some of its rural PCNs using a different approach. AHS Mental Health Liaison workers spend part of their time at PCN clinics seeing patients whose doctors feel would benefit from this type of short-term treatment in the primary clinic setting.

We talked to AHS staff and PCNs associated to these programs and the consensus was that patients benefit. Those suited to this type of treatment are assessed and treated in a timely manner and in a familiar and less stigmatizing environment. They do not have to access other finite community mental health resources unless it is deemed necessary after assessment by a qualified mental health clinician, who ensures they are referred to the appropriate program.

Wait time management

Mental health programs at the community clinics we visited continue to be heavily subscribed. Wait times for new patients to see therapists for individual counselling between initial intake and the first appointment still exist. These varied from an average of 30 days (for the adult short-term program) and 90 days (adult long-term program) at one large city clinic to as short as five to ten days at a clinic in a smaller locale.

Some clinics were able to reduce wait time length by changing their practices. One clinic found that phoning clients to remind them of upcoming appointments helped reduce the number of no shows and resulting unproductive use of therapists' time. They were also able to reuse these time slots when the contacted client advised they would be unable to make their booked appointment and wanted to reschedule. This freed up time was then used to move up another client further back on the wait list or provide a new intake a more timely appointment.

Other clinics have managed wait lists by offering new services using existing staff resources. Some now offer a recurring brief intervention clinic, which is similar in concept to the behavioural health

[78] These include non-chronic and situational conditions such as anger, anxiety/panic, grief and loss, depression, stress, sleeping problems, relationship concerns and a variety of other lifestyle problems.

consultation service AHS operates with PCNs. Clients who are identified by intake as needing short-term support for a situational crisis (such as getting over the death of someone close or a failed relationship) are given the next available appointment with the therapist who runs this clinic. The therapist meets the person individually, typically for between one to four sessions, to help them deal with their situation. Clinics have found clients get the help they need through this process and don't have to wait for a spot to open up in the short-term program.

A number of clinics now offer clients immediate access to different group sessions while they wait for their first scheduled appointment with a therapist. The purpose is to provide clients with insight into what they can expect from therapy and a level of support while they are waiting. Other groups help clients deal with such concerns as stress management, relationship dynamics, budgeting and finances. These groups have helped reduce wait times since some clients find they get the help they need from the group settings and end up cancelling their individual therapy appointment, thereby freeing that time for someone else to use.

Coordinated intake at mental health clinics

The intake function at community mental health clinics remains the primary means for clients to access that system. Clients make contact with intake in a variety of ways: they can walk into or call a clinic or be referred by a doctor, social worker, hospital in-patient unit, etc.

Intake in all zones we visited is now staffed with mental health professionals. They conduct an initial triage assessment with a client to evaluate what their primary mental illness is and what program(s) are best suited for them and where—whether a specific program in the AHS continuum or one offered by other community partners. Intake staff will then make an initial appointment for the client with the appropriate AHS program or provide them with the necessary contact information for the community resource.

With the exception of Calgary zone, all zones continue to operate stand-alone intake functions at individual mental health clinics and for specialty programs. Calgary's Access Mental Health is a centralized point of access/intake process which makes appointments for 85 per cent of that city's adult mental health programs; seven rural clinics[79] in the east part of the zone have also set up a similar functionality for all programs offered at those sites.

Individual AHS addiction clinics also operate their own stand-alone intake functions. In several locations where mental health and addiction clinics were either co-located or immediately adjacent to each other we saw examples of joint intake between the two functions.

People looking for information on community mental health or addictions resources can contact two toll-free numbers listed on AHS' website.[80] This service is run by Health Link Alberta and staff there have access to a provincial data base of community mental health and addictions resources.

Improved relationships with not-for-profit organizations

AHS continues to rely heavily on not-for-profit organizations to help it provide a continuum of care to mental health clients, especially in the community. It contracts with a variety of these organizations across the province to provide services such as housing, supportive living, distress lines and outreach programs.

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[79] These are clinics in Strathmore, Didsbury, Airdrie, Chestermere, Black Diamond, Okotoks and High River.
[80] https://myhealth.alberta.ca/Pages/Emergency-Phone-Numbers.aspx

We talked with representatives from a number of these contracted organizations. For the most part they indicated that their organizations had good working relationships with AHS; if problems or concerns arose there were processes in place for both parties to meet and deal with these in a timely fashion. We were given examples where AHS and not-for-profit organizations' staff worked together in partnership to deliver programs in the community and where AHS provided access to training and education. We did not hear of any situations that were as problematic as those mentioned in our 2008 report.[81]

We noted no significant problems with contractual reporting requirements; a number of the contracted organizations' representatives told us AHS is quite flexible around this requirement. We spoke to AHS zone contract managers who said they will work with their not-for-profits to try and keep this process as simple as possible for them, especially the smaller ones with limited administrative resources.

One common concern raised by not-for-profits was the level of funding. Many organizations find the demand for their services exceeds their capacity. More money would help them increase wages to retain and attract qualified staff and reduce the pressure on many of their program areas.

Strengthening treatment for clients with concurrent disorders

With AADAC becoming part of AHS in 2009, integrated treatment for patients with concurrent disorders[82] has become much easier. Previous barriers around sharing of patient clinical information between the two programs have been removed. Mental health therapists and addictions counsellors can now freely collaborate and work together to coordinate and jointly provide treatment for clients with concurrent disorders. Clinicians we spoke to in every zone confirmed this.

This works best where mental health and addictions community clinics and staff are co-located in either same facility or adjacent to each other in the same building. AHS has already co-located a number of clinics throughout Alberta and is planning to add more as new sites are developed.

Working with community partners to find housing for homeless individuals

We saw a number of good practices in different parts of the province where AHS works with community partners to find housing for homeless individuals with complex mental health and other needs, and AHS staff provide the supports necessary to keep them housed. We already identified some of these programs as good practices in our 2008 report.

Two newer initiatives are:

DiverseCity Housing Team (Edmonton)

- Helps referred clients find permanent, affordable rental accommodation or interim transitional housing. Team works with closely with Homeward Trust Edmonton[83] and has good partnerships with a number of local landlords.
- Team provides all necessary on-site 1:1 supports to enable the individual to remain in this housing; goal is to eventually wean clients off this level of support as they become used to routine and more self-sufficient and responsible.
- Demand for service currently exceeds available rental supply. Currently supporting 35 housed clients and looking for spaces for ten active referrals.

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81 *Report of the Auditor General of Alberta—October 2008,* page 170.
82 These are clients who have both a mental illness and addictions.
83 http://www.homewardtrust.ca/programs/housing-first.php

Clinical Intervention and Support Team (Lethbridge)

- Funded by the City of Lethbridge, this is a joint venture between AHS and the City of Lethbridge Police Service. Suitable candidates are referred by Home Base[84] (a non-profit agency funded by the CMHA).
- The team provides necessary mental health and living supports to help keep clients stable and from being evicted. Staff will also develop a treatment plan and connect a client with any suitable community resources.
- Currently supporting 15 individuals who would otherwise be homeless.

Demand for these types of programs is high.

Housing managers in a number of zones work directly with local developers to try and increase access to existing or planned housing spaces for mental health and addiction clients. They have also helped non-profit housing providers build business cases to obtain alternative sources of funding for construction of these housing spaces. However, these efforts were typically done on the initiative of an individual manager and not as part of any overall zone or AHS strategy.

Working with other Government of Alberta partners to help populations with complex service needs

Community Support Teams are the result of a joint initiative between AHS and Human Services (People with Developmental Disabilities) which began in 2013. These teams are comprised of local AHS zone and PDD regional staff who work together to jointly serve a population who have complex service needs: people with developmental disabilities who require intensive community services and have significant mental health or chronic substance abuse/dependency problems. These multidisciplinary teams[85] work directly with various community service providers to help them provide the necessary supports to keep these complex needs clients stable and in their own communities. Edmonton and Calgary currently each have a Community Support Team in place, who will provide support to the other zones as needed. AHS is currently in the process of establishing CST teams in each of its other zones.

Working with inner city homeless population

The Inner City Supports Team (based out of the 108 Street Mental Health Clinic in Edmonton) was started in 2010. It currently comprises four mental health therapists and an independent living support worker who act as an outreach resource for the inner city population who are chronically homeless and have mental illness and addictions.[86] Team members attend at the various inner city agencies (such as the Bissell Centre, Hope Mission, George Spady Centre and Herb Jamieson Centre) to connect with clients and provide any required counselling and identify and facilitate access to whatever community

[84] A Housing First Service providing centralized intake, assessment and triage for the homeless, and those who are at risk of becoming homeless. Works with other local non-profit agencies and co-operative landlords to place homeless clients in available residential spaces in Lethbridge.

[85] Teams may be comprised of behaviour therapists, occupational therapists, social workers, psychologists, nurses, mental health therapists, therapy assistants and ILS workers.

[86] Another registered nurse who works out of the Boyle McCauley Health Centre and sees clients there is also considered part of the team.

supports they may need, including AHS community mental health and addictions clinics. Each weekday morning a team member also attends at the Royal Alexandra hospital emergency department to deal with any patients identified by its embedded mental health nursing team as homeless. The goal of this team is to try and remove barriers faced by the homeless inner city population in accessing mental health and addiction treatment and supports. Team staff told us they are extremely busy and could use three times their existing staff to deal with their volume of referrals.

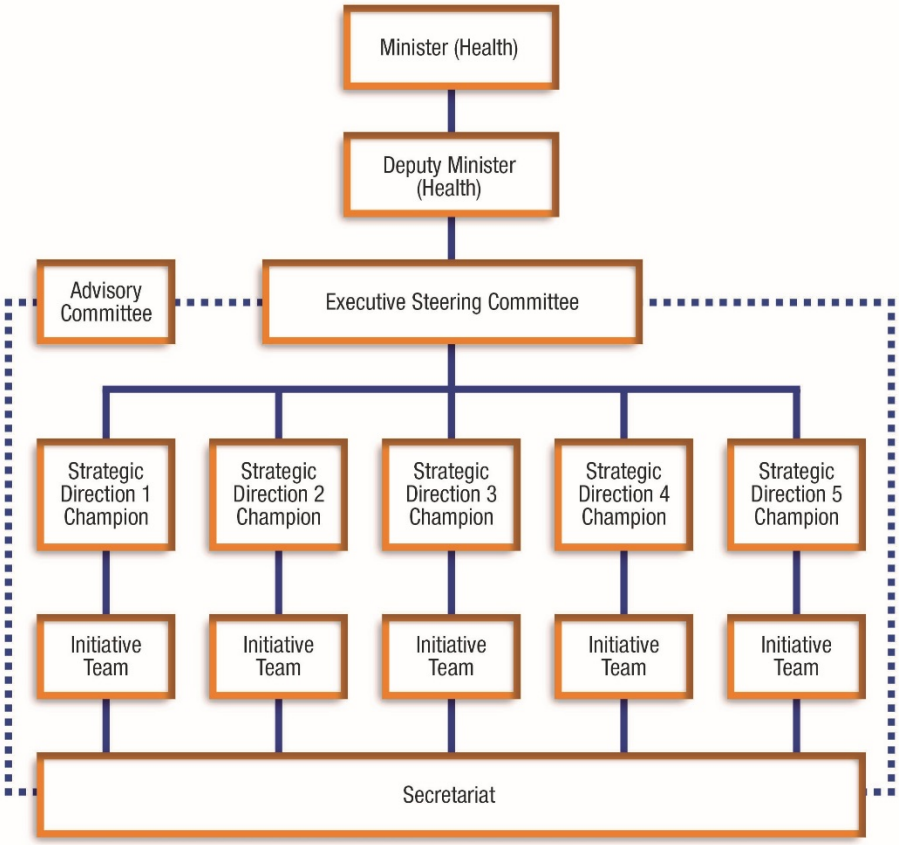
Appendix D

2011 ADDICTIONS AND MENTAL HEALTH STRATEGY GOVERNANCE FRAMEWORK

The stated purpose of the strategy is to reduce the prevalence of addiction and mental illness in Alberta through health promotion and prevention activities and providing better assessment, treatment and support services. To accomplish this, the strategy identifies five strategic directions, with each strategic direction having its own specific priorities, expected key results and initiatives (or actions) to achieve these priorities. The five strategic directions are:

1. Build healthy and resilient communities
2. Foster the development of healthy children, youth and families (including seniors)
3. Enhance community-based services, capacity and supports
4. Address complex needs
5. Enhance assurance

Governance Structure



DESCRIPTION	ROLE
Executive Steering Committee	• Executive body responsible for providing strategic direction for strategy implementation and identifying projects for Initiative Teams to work on. • Authority to review and approve final deliverables of these projects or any changes in their scope, costs or timelines. • Includes senior management representation from AHS, Alberta Health and other ministries (such as Human Services, Education, Justice and Solicitor General) as well as the Champions. • Meets monthly. • Chair[87] reports to the Deputy Minister of Health.
Advisory Committee	• Comprises representatives from Alberta Health, AHS and other Government of Alberta (GOA) ministries (including Human Services, Justice and Solicitor General and Education), the Mental Health Patient Advocate and various community stakeholders and not-for-profit organizations. • Provides input to Executive Steering Committee (ESC) on which strategic direction initiatives should be focused on to move the strategy forward.
Secretariat	• Comprises representatives from AHS and Alberta Health senior management. • Advises and provides any necessary support to the Initiative Teams, monitors progress of various projects and provides monthly summary status reports to ESC. • Meets regularly as required.
Champions	• Five in total, one for each of the strategy's strategic directions. Currently either an assistant deputy minister (GOA) or senior management level (AHS). • Provide oversight and direction to the initiative teams working on projects falling under their assigned strategic direction to ensure successful completion of task(s). • Responsible for providing regular status updates on their projects to ESC.
Initiative Team(s)	• Individuals or teams tasked with doing the work on projects associated to specific strategic direction initiatives selected by ESC. Formed as required and staffed with employees from AHS, Alberta Health, other partner GOA ministries or organizations or contract resources. • Accountable to the strategic direction Champion responsible for the initiative they are working on. • Each team formed to work on a specific project has an identified lead who: - develops an implementation plan for approval by the appropriate Champion - submits quarterly written status reports to the Champion and Secretariat and makes project progress presentations as required to the ESC - prepares a final project report for submission to ESC

[87] Current chair is ADM of Alberta Health, Health Services Division.

Transportation—Systems to Manage the Structural Safety of Bridges Follow-up

SUMMARY

In 2012[1] we reported the results of our audit of the Department of Transportation's systems to manage the structural safety of bridges. We concluded that the department generally had well-designed systems but identified several significant findings resulting in nine recommendations to improve processes related to:

- inspection contracting, quality and frequency
- contractor certification
- bridge information system access
- maintenance activity reporting
- capital planning submissions

We have followed up on the department's progress in implementing the recommendations and have concluded the department has implemented seven of the recommendations.

Overall conclusion

The department has made significant improvement to processes to inspect and monitor the structural safety of Alberta's bridges. We did not find evidence of unsafe bridges when completing our follow-up audit procedures. Processes to contract inspections to independent third parties still require improvement. The department's decisions on selecting contractors lack clarity, and it should complete an analysis on the cost effectiveness of contracting out these services.

What we found

The department improved its systems to manage the structural safety of bridges by:

- collecting information on the duration of each bridge inspection
- re-designing the contractor certification process and ensuring all inspectors are certified
- implementing an overdue inspection process
- monitoring that contractors comply with standards
- monitoring access to the bridge information system
- reporting inspection activities and results to executive management
- improving its capital plan submissions

What needs to be done

We repeat two recommendations related to the department's process to contract external parties to monitor the safety of bridges. The department has not fully implemented recommendations to:

- improve contracting processes for visual inspections
- regularly assess if contracting out the inspections is cost effective

[1] *Report of the Auditor General of Alberta—October 2012*, pages 17-33.

Why this is important to Albertans

The Department of Transportation is responsible for ensuring the safety of bridges across Alberta. Well-maintained bridges are necessary to ensure the safety of Albertans and protect their investment. Many of Alberta's major industries rely on the highway system to move goods.

AUDIT OBJECTIVES AND SCOPE

Our audit objective was to determine if the department implemented our nine October 2012 recommendations. To perform the audit, we:

- interviewed management and staff to learn what actions they took in response to our recommendations
- examined the department's systems, processes and policies for overseeing and delivering the bridge program
- tested the department's spot audit and inspection frequency for compliance with policy

We conducted our work from July 2014 to May 2015. We substantially completed our audit on May 26, 2015. Our audit was done in accordance with the *Auditor General Act* and the standards for assurance engagements set by the Chartered Professional Accountants of Canada.

BACKGROUND

The department is responsible for building and maintaining provincial highways, including all bridges and culverts on the highway network. Bridges and culverts on local roads are generally the responsibility of municipalities.

The number of bridge structures managed by the department is about 4,400, which includes both bridges and culverts:[2]

- Major bridges are typically built from site-specific drawings but can also be built from standard girder drawings. Typically, major bridges are river crossings, highway interchanges or railway crossings.
- Standard bridges are built using standard bridge design drawings and generally are comprised of standard precast girders, with steel or concrete substructure elements, and supported on steel or concrete piles. Typically, standard bridges are river crossings.
- Culverts are cylindrical structures made of metal or concrete. They manage water flows under roadways. Bridge sized culverts have a diameter at least 1,500 mm, or where several culverts are at the same location, the total diameter of all of them is at least 1,500 mm.

The department designed an inspection program to assess the condition of bridges, identify if maintenance is needed, and provide information to decide when bridges should be either rehabilitated or replaced.

The department has established two levels of bridge inspections and documented the standards for each type in inspection manuals:

- Level 1 inspections are visual assessments of the bridge's condition, using basic tools and equipment, performed on all bridges and culverts with diameter of 1,500 mm or larger.
- Level 2 inspections are in-depth inspections using specialized equipment. They are conducted on bridges that have known structural defects or need frequent monitoring due to age, design or traffic.

[2] http://www.transportation.alberta.ca/Content/docType30/Production/bis_v2_05.pdf

The department's manuals detail the:
- qualifications and training of bridge inspectors
- rating scale inspectors use in level 1 inspections to assess bridge conditions
- bridge information systems that store data on bridges and level 1 inspection results

All bridge inspectors must complete the department's training and certification program. Two levels of certification are available: Class A inspectors can inspect all bridges while Class B inspectors can only inspect standard bridges and culverts.

The department outsources level 1 bridge inspections. Contracts are for three years, and include doing the inspections, reviewing the results for completeness and compliance with standards, and data entry. For the three-year period 2015–2018, the department will pay four contractors about $3.1 million.

FINDINGS AND RECOMMENDATIONS

Contracting level 1 bridge inspections—repeated

Background

In 2012[3] we recommended that the department improve its process to contract its level 1 inspections by:
- documenting how it establishes criteria for assessing candidates and awards points for each criterion
- ensuring proposal requirements do not limit qualified candidates

When contracting visual inspections for the three-year period 2012–2015, we found the department excluded past performance and did not establish or document how it awarded points for the criteria it used to evaluate proposals. The department's Project Administration Manual requires that proposals be evaluated using specified and established weightings.

The department also required that potential contractors must be Class A bridge inspectors that had reviewed at least 50 inspection reports in the prior three years to be eligible. This limited candidates to incumbent contractors and new contractors employing Class A bridge inspectors previously employed by incumbents.

We repeat part of this recommendation as the department did not document how it selected criteria for assessing the 2015–2018 contract proposals, did not establish how it awards points, and did not demonstrate that it had applied criteria consistently.

RECOMMENDATION 10: IMPROVE CONTRACTING FOR LEVEL 1 BRIDGE INSPECTIONS—REPEATED

We again recommend that the Department of Transportation improve its process to contract its visual inspections by documenting how it establishes criteria for assessing candidates and awards points for each criterion.

[3] *Report of the Auditor General of Alberta—October 2012*, no. 6, page 27.

Criteria: the standards for our audit

The department should comply with its Project Administration Manual when contracting inspection work:

- The request for proposals should include criteria and the weighting assigned to each. A selection committee consisting of three to five experienced and senior staff should review the proposal and agree on the criteria.
- All criteria should initially be assigned the following minimum range value, and then adjusted based on project requirements to give a total score of 100:

CATEGORY	PERCENTAGE
Clarification and presentation	0 – 10
Project comprehension	10 – 30
Resource budget	10 – 20
Project control	5 – 10
Innovation	0 – 25
Project team	20 – 30
Past performance	30
Total	**100**

Our audit findings

KEY FINDINGS

- Contracting requirements were improved to reduce limitations on eligible contractors.
- Contracting decisions do not demonstrate consistent application of criteria.

The department ensured candidates were not limited for 2015-2018 level 1 inspections by:

- removing the requirement that inspectors perform a minimum of 50 inspections in the previous three years
- increasing the number of inspection contracts from four to ten and limiting the number of contracts that could be awarded to one consultant to four

The department revised its criteria for 2015-2018 level 1 inspections to include relevant experience, both past performance and other experience relevant to the inspections. The department considers the following criteria and weightings to be reasonable and in compliance with the department's current practice:

CATEGORY	PERCENTAGE
Project comprehension	25
Resource budget	30
Project team	25
Relevant experience	20
Total	**100**

The department did not, however, establish the specific requirements to be met for each criteria and points assigned for meeting each requirement. The department's support for contracting decisions did not demonstrate consistent application of criteria, and what distinguished the score for one proposal from another.

Implications and risks if recommendation not implemented

Without a rigorous, fair and transparent contract process, the department risks not obtaining the best services for the best price.

Assessing whether to contract out inspections—repeated

Background

In 2012[4] we recommended that the Department of Transportation regularly assess whether it should contract out inspections or do them itself. We found an analysis of the cost effectiveness of outsourcing inspection work has not been completed since 1997.

For the year ended March 31, 2015, contracted inspectors performed approximately 2,000 inspections in 400 working days at a cost to the department of $900,000.

We repeat this recommendation as the department has yet to complete a cost effectiveness analysis on outsourcing inspections.

RECOMMENDATION 11: ASSESS WHETHER TO CONTRACT OUT PROGRAM DELIVERY—REPEATED

We again recommend that the Department of Transportation regularly assess whether it should contract out inspections or do them itself.

Criteria: the standards we used for our audit

The department should periodically assess if it is more cost effective to outsource inspections or do them itself.

Our audit findings

KEY FINDINGS

- An analysis of the cost effectiveness of outsourcing inspections has yet to be completed.
- The department plans to perform an analysis prior to awarding inspection contracts in 2018.

In February 2015 the department completed its process of contracting inspections for the three-year period 2015–2018. No analysis of cost effectiveness of outsourcing the inspection work was done prior to the department's decision to award contracts.

The department plans to do a comprehensive review of its inspection process, before the current contracts finish in 2018. It will document the inspection process, assess whether changes are required, perform a risk assessment, and conclude whether contracting inspections is optimal.

Implications and risks if recommendation not implemented

Without a regular assessment of the costs and benefits of contracting out bridge inspections, the department does not know if it is getting value for the money it spends on these services.

[4] *Report of the Auditor General of Alberta—October 2012*, no. 5, page 26.

Improving inspection processes—implemented

Background

In 2012[5] we recommended that the department improve its inspection processes by ensuring that it collects all the information it needs to assess the quality of inspections.

We found the department had well-structured and comprehensive manuals to guide inspectors and the inspection forms were clear and well organized. However, the department was not collecting information on the time spent for inspections and the number of inspections done in a day. The department's assessment of the quality of the inspections should consider this information. Of the 40 spot audits conducted in 2011 that we tested, 12 had recommendations not identified in the original inspection. We also observed that one contractor appeared to perform a high number of inspections in one day.

Our audit findings

Since October 2013, the department requires inspectors to record their arrival and departure time for each inspection. This information is recorded in the department's Bridge Inspection and Maintenance System (BIMS). We examined on a sample basis the duration of inspections and identified inspection data outliers. The department acknowledged that it has not used the inspection duration information in its quality assurance process but will use it when selecting bridges for its 2015 spot audits. The department only had duration information on less than half its bridges prior to 2015.

Proper certification of contractors—implemented

Background

In 2012[6] we recommended that the department should only accept inspections if they are performed and reviewed by inspectors that maintain valid certification. We found the department overrode controls to ensure that only inspections completed by certified inspectors were entered into the bridge information systems. As a result of overriding the control, approximately 50 per cent of inspections entered into the system for the year ended March 31, 2011 were completed by inspectors whose certification had lapsed.

Our audit findings

The department implemented our recommendation by verifying all inspectors are fully certified prior to performing inspections. This verification is confirmed by documenting each inspector's practical and historical experience, training and certification requirements. Bridge inspector certification is required at the start of every contract regardless of the contract duration.

The department also revised its certification requirements to include more stringent mentoring and practical experience for inspectors. We examined a list of all bridge inspectors as of April 9, 2014 and examined the department's documentation that inspectors were properly certified. We also confirmed that all bridge inspectors that performed and recorded inspections in the BIMS from April 1, 2013 to March 31, 2014 were properly certified as either a Class A or Class B inspector.

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5 *Report of the Auditor General of Alberta—October 2012*, no. 1, page 21.
6 *Report of the Auditor General of Alberta—October 2012*, no. 3, page 24.

Inspection frequency of bridges—implemented

Background

In 2012[7] we recommended that the department ensure bridges are inspected as frequently as standards require. We found in one period about 150 inspections were done more than a year after they were due in one of the department's four inspection regions. The department's reporting processes did not identify that the bridge inspections were late or missed. The region could not explain why it did not inspect several structures.

Our audit findings

The department implemented a quarterly process that identifies any overdue bridge inspections. Overdue inspections are brought to the attention of the regional bridge managers to remedy.

We examined four bridge structures with inspections 18 months overdue as of March 26, 2015. Management provided valid explanations for the overdue inspections and we observed the department included the four structures in the next inspection cycle.

Assessing quality of inspections—implemented

In 2012[8] we recommended that the department regularly assess whether contractors perform inspections following department standards and take corrective action if contractors do not.

We found the department's process to monitor the quality of inspections was not followed consistently as required spot audits had not been done for two of the prior four years. Spot audits that were done reported inaccurate inspector ratings. The department lacked a process to remedy poor contractor performance.

Our audit findings

In late 2012 the department implemented revisions to its quality assurance process by documenting the goals, responsibilities, bridge spot audit selection and review processes. One goal is to identify inspections that do not meet the department's standards so that action can be taken. Inspectors found to have poor performance are reported to the regional bridge managers for a corrective review within one month of receiving the performance information.

The department completed about 40 spot audits in each of 2013 and 2014 applying its revised procedures. Reports to regional bridge managers described how the bridges were selected, the results of the audits, and maintenance recommendations not identified by the inspectors. Of the 39 spot audits completed for 2014, the department assessed three as unacceptable. We examined the department's documentation of the actions taken by inspectors to correct their performance.

In April 2014[9] the department issued further detailed requirements and procedures for selecting bridges for the spot audit process, where:

- a risk-based approach is applied focusing on bridges that had components rated as poor in the previous bridge inspection—The department defines poor as structures with the presence of distress or deterioration and not functioning as intended.
- a minimum 10 spot audits are completed in each region

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7 *Report of the Auditor General of Alberta—October 2012*, no. 4, page 25.
8 *Report of the Auditor General of Alberta—October 2012*, no. 2, page 23.
9 Alberta Transportation, Bridge Inspection and Maintenance Systems Manual, December 20, 2005, Section 1.09.

Monitoring access to the bridge information system—implemented

Background

In 2012[10] we recommended that the Department of Transportation improve its inspection processes to monitor access to the computer system that manages bridge inventory and inspections. We found the department did not regularly monitor access to the bridge inspections and maintenance system and staff and contractors had access they did not need to perform their work.

Our audit findings

The department implemented the recommendation by:

- performing annual reviews of access for staff and contractors in 2013 and 2014—We examined documentation of the results of the department's monitoring of access and removal of inappropriate access and assessed the process was adequate.
- issuing written documentation, effective April 1, 2015, of the Annual System Security Roles Review Process—The process outlines roles and responsibilities and requires evidence of the annual access rights review to be retained by the department's information technology security staff.

Improving reporting of maintenance activities—implemented

Background

In 2012[11] we recommended that the department improve the information that senior management receives on inspector activities, results, maintenance and other actions.

Bridge inspectors are required to assess the condition of each main bridge component and assign ratings from 1 to 9, using guidance in the level 1 Bridge Inspection Manual. Bridge components rated 3 or less should have a maintenance recommendation. Maintence recommendations can include any of: replacement, repair, rehabilitation, assessment level 2 inspection, reduce inspection cycle or monitoring.

The Bridge Inspection Manual states that the timing of bridge maintenance should generally follow accepted timelines, depending on the rating assigned to the component. The timelines for components that are rated as 1 is immediate, 2 is six months and 3 is before the next inspection cycle. Timelines for components rated four to nine range from low priority to no action required.

In 2012 we found the department did not track the results of inspections, conclusions on bridge elements ranked as high priority, and whether required maintenance was done in recommended timelines. Senior management also did not receive good summary information on these areas.

Our audit findings

Bridge managers in each of the four regions report monthly to the regional directors on the status of all inspections in the current and prior periods that identified major components in poor condition. We reviewed the reports and found that the department's plan to deal with the deficiency was reported, and that the department tracked the status of the deficiency until it was corrected. If the department decided to repair the deficiency, the report tracked the timing of the work and current status.

[10] *Report of the Auditor General of Alberta—October 2012*, no. 7, page 28.
[11] *Report of the Auditor General of Alberta—October 2012*, no. 8, page 29.

The department reports annually to senior management on the bridge inspection activities. The reports are comprehensive and include:

- the overdue inspections by region, with explanation for the delay and actions to correct
- findings from the spot audit process, and actions taken to remedy any poor performance
- confirmation that all inspections were performed by certified inspectors
- the monitoring of access to the bridge information system, findings, and actions taken to correct access
- the listing of all inspections in the current and prior periods that identified major bridge components in poor condition, and the department's actions to respond to the deficiencies
- the department's capital funding request for the next year and the funding approved

Enhancing the capital planning submission—implemented

Background

In 2012[12] we recommended that the department improve its capital plan submission to ensure that it gives decision makers the information they need to assess the impact of funding alternatives on bridge safety and protection of the province's investment.

We found the department's process to develop the capital plan submission was well-designed but did not fully follow the prescribed format. The department did not provide sufficient information to the Department of Treasury Board and Finance to allow decision makers to better understand the risks of different funding levels on safety, service levels and future funding needs.

Our audit findings

The department improved its capital plan submission by preparing detailed presentations on bridges, tailored for decision makers to easily understand the capital needs and expected outcomes. The presentations provide information on the current condition of provincial bridges using photographs and graphs to communicate specific and general examples of expected outcomes, costs, and safety risks. The presentation also examines the impact funding levels have on bridge deferred maintenance including the expected outcomes on the safety and condition of bridges and the optimal time to rehabilitate or replace bridges.

[12] *Report of the Auditor General of Alberta—October 2012*, no. 9, page 31.

Glossary

REPORT OF THE AUDITOR GENERAL OF ALBERTA

July 2015

GLOSSARY

Accountability for results The obligation to show continually improving results in the context of fair and agreed on expectations. For Albertans to receive value for money, all those who use public resources must:

- set measurable results and responsibilities
- plan what needs to be done to achieve results
- do the work and monitor progress
- report on results
- evaluate results and provide feedback (results analysis)

Accrual basis of accounting A way of recording financial transactions that puts revenues and expenses in the period when they are earned and incurred.

Adverse auditor's opinion An auditor's opinion that things audited do not meet the criteria that apply to them.

Assurance An auditor's written conclusion about something audited. Absolute assurance is impossible because of several factors, including the nature of judgement and testing, the inherent limitations of control and the fact that much of the evidence available to an auditor is only persuasive, not conclusive.

Attest work, attest audit Work an auditor does to express an opinion on the reliability of financial statements.

Audit An auditor's examination and verification of evidence to determine the reliability of financial information, to evaluate compliance with laws or to report on the adequacy of management systems, controls and practices.

Auditor A person who examines systems and financial information.

Auditor's opinion An auditor's written opinion on whether things audited meet the criteria that apply to them.

Auditor's report An auditor's written communication on the results of an audit.

Business case An assessment of a project's financial, social and economic impacts. A business case is a proposal that analyzes the costs, benefits and risks associated with the proposed investment, including reasonable alternatives.

Capital asset A long-term asset.

COBIT Abbreviation for Control Objectives for Information and Related Technology. COBIT provides good practices for managing IT processes to meet the needs of enterprise management. It bridges the gaps between business risks, technical issues, control needs and performance measurement requirements.

COSO Abbreviation for Committee of Sponsoring Organizations of the Treadway Commission. COSO is a joint initiative of five major accounting associations and is dedicated to development of frameworks and guidance on risk management, internal control and fraud deterrence.

Criteria Reasonable and attainable standards of performance that auditors use to assess systems or information.

Cross-ministry The section of this report covering systems and problems that affect several ministries or the whole government.

Crown Government of Alberta

Deferred maintenance Any maintenance work not performed when it should be. Maintenance work should be performed when necessary to ensure capital assets provide acceptable service over their expected lives.

Enterprise risk management (ERM) The systems and processes within an organization used to identify and manage risks so it can achieve its goals and objectives. An ERM creates linkages between significant business risks and possible outcomes so that management can make informed decisions. An ERM framework helps organizations identify risks and opportunities, assess them for likelihood and magnitude of impact, and determine and monitor the organization's responses and actions to mitigate risk. A risk-based approach to managing an enterprise includes internal controls and strategic planning.

Enterprise resource planning (ERP) Abbreviation for enterprise resource planning. ERPs integrate and automate all data and processes of an organization into one comprehensive system. ERPs may incorporate just a few processes, such as accounting and payroll, or may contain additional functions such as accounts payable, accounts receivable, purchasing, asset management, and/or other administrative processes. ERPs achieve integration by running modules on standardized computer hardware with centralized databases used by all modules.

Exception Something that does not meet the criteria it should meet—see "Auditor's opinion."

Expense The cost of a thing over a specific time.

IFRS International Financial Reporting Standards (IFRS) are global accounting standards, adopted by the Accounting Standards Board of the Chartered Professional Accountants of Canada. They are required for government business enterprises for fiscal years beginning on or after January 1, 2011.

GAAP Abbreviation for "generally accepted accounting principles," which are established by the Chartered Professional Accountants of Canada. GAAP are criteria for financial reporting.

Governance A process and structure that brings together capable people and relevant information to achieve results (the cost-effective use of public resources).

Government business enterprise A commercial-type enterprise controlled by government. A government business enterprise primarily sells goods or services to individuals or organizations outside government, and is able to sustain its operations and meet its obligations from revenues received from sources outside government.

Internal audit A group of auditors within a ministry (or an organization) that assesses and reports on the adequacy of the ministry's internal controls. The group typically reports its findings directly to the deputy minister or governing board. Internal auditors need an unrestricted scope to examine business strategies, internal control systems, compliance with policies, procedures, and legislation, economical and efficient use of resources and effectiveness of operations.

Internal control A system designed to provide reasonable assurance that an organization will achieve its goals. Management is responsible for an effective internal control system in an organization, and the organization's governing body should ensure that the control system operates as intended. A control

system is effective when the governing body and management have reasonable assurance that:
- they understand the effectiveness and efficiency of operations
- internal and external reporting is reliable
- the organization is complying with laws, regulations and internal policies

Management letter Our letter to the management of an entity that we have audited. In the letter, we explain:
1. our work
2. our findings
3. our recommendation of what the entity should improve
4. the risks if the entity does not implement the recommendation

We also ask the entity to explain specifically how and when it will implement the recommendation.

Material, materiality Something important to decision makers.

Misstatement A misrepresentation of financial information due to mistake, fraud or other irregularities.

Outcomes The results an organization tries to achieve based on its goals.

Outputs The goods and services an organization actually delivers to achieve outcomes. They show "how much" or "how many."

Oversight The job of:
- being vigilant,
- checking that processes/systems, including the accountability for results system, are working well, and
- signaling preferred behaviour,

all in the pursuit of desired results.

Performance measure Indicator of progress in achieving a desired result.

Performance reporting Reporting on financial and non-financial performance compared with plans.

Performance target The expected result for a performance measure.

PSAB Abbreviation for Public Sector Accounting Board, the body that sets public sector accounting standards.

PSAS Abbreviation for public sector accounting standards, which are applicable to federal, provincial, territorial and local governments.

Qualified auditor's opinion An auditor's opinion that things audited meet the criteria that apply to them, except for one or more specific areas—which cause the qualification.

Recommendation A solution we—the Office of the Auditor General of Alberta—propose to improve the use of public resources or to improve performance reporting to Albertans.

Review Reviews are different from audits in that the scope of a review is less than that of an audit and therefore the level of assurance is lower. A review consists primarily of inquiry, analytical procedures and discussion related to information supplied to the reviewer with the objective of assessing whether the information being reported on is plausible in relation to the criteria.

Risk Anything that impairs an organization's ability to achieve its goals.

Sample A sample is a portion of a population. We use sampling to select items from a population. We perform audit tests on the sample items to obtain evidence and form a conclusion about the population as a whole. We use either statistical or judgemental selection of sample items, and we base our sample size, sample selection and evaluation of sample results on our judgement of risk, nature of the items in the population and the specific audit objectives for which sampling is being used.

Standards for systems audits Systems audits are conducted in accordance with the assurance and value-for-money auditing standards established by the Chartered Professional Accountants of Canada.

Systems (management) A set of interrelated management control processes designed to achieve goals economically and efficiently.

Systems (accounting) A set of interrelated accounting control processes for revenue, spending, preservation or use of assets and determination of liabilities.

Systems audit To help improve the use of public resources, we audit and recommend improvements to systems designed to ensure value for money. Paragraphs (d) and (e) of Subsection 19(2) of the *Auditor General Act* require us to report every case in which we observe that:

- an accounting system or management control system, including those designed to ensure economy and efficiency, was not in existence, or was inadequate or not complied with, or
- appropriate and reasonable procedures to measure and report on the effectiveness of programs were not established or complied with.

To meet this requirement, we do systems audits. Systems audits are conducted in accordance with the auditing standards established by the Chartered Professional Accountants of Canada. First, we develop criteria (the standards) that a system or procedure should meet. We always discuss our proposed criteria with management and try to gain their agreement to them. Then we do our work to gather audit evidence. Next, we match our evidence to the criteria. If the audit evidence matches all the criteria, we conclude the system or procedure is operating properly. But if the evidence doesn't match all the criteria, we have an audit finding that leads us to recommend what the ministry or organization must do to ensure that the system or procedure will meet all the criteria. For example, if we have five criteria and a system meets three of them, the two unmet criteria lead to the recommendation. A systems audit should not be confused with assessing systems with a view to relying on them in an audit of financial statements.

Unqualified auditor's opinion An auditor's opinion that things audited meet the criteria that apply to them.

Unqualified review engagement report Although sufficient audit evidence has not been obtained to enable us to express an auditor's opinion, nothing has come to our attention that causes us to believe that the information being reported on is not, in all material respects, in accordance with appropriate criteria.

Value for money The concept underlying a systems audit is value for money. It is the "bottom line" for the public sector, analogous to profit in the private sector. The greater the value added by a government program, the more effective it is. The fewer resources used to create that value, the more economical or efficient the program is. "Value" in this context means the impact that the program is intended to achieve or promote on conditions such as public health, highway safety, crime or farm incomes. To help improve the use of public resources, we audit and recommend improvements to systems designed to ensure value for money.

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