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Aggregate extraction from the active area of surface water bodies "has been prohibited in the United Kingdom, Germany, France, The Netherlands, and Switzerland and is being reduced in rivers in Italy, Portugal, and New Zealand".

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C. Relationship to GoA Strategic Policy

1. Land-use Framework

- Need to provide guidance to LUF regional plans as to where aggregate extraction from surface water bodies may be acceptable.
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- Surface Water Aggregate Policy would be applicable to public and private lands, as per Guidelines for Risk Assessments.
- Relevant Strategies:
 - Strategy 1: Develop seven regional land-use plans based on seven new land-use regions.
 - Strategy 3: Cumulative effects management will be used at the regional level to manage the impacts of development on land, water, and air.
 - Strategy 4: Develop a strategy for conservation and stewardship on private and public lands

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- Supports the Healthy Aquatic Ecosystems outcome through the Guidelines for Risk Assessments, which would help to ensure the maintenance and preservation of natural habitat.
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 - Action 2.1: Enforce protection of known critical aquatic ecosystems using existing legislation
 - Action 2.6: Implement aquatic restoration plan and conserve key aquatic ecosystems through regional land-use approaches and identified partnerships

D. Work to Date

Numerous attempts have been made at drafting a GoA Surface Water Body Aggregate Policy. Due to the number of parties involved, it has been difficult to obtain consensus.

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F. Proposed Future Work

- Educate stakeholders
- Develop Guidelines for Risk Assessment
- Develop a Monitoring and Evaluation Plan

For all of the above, see attached implementation plans (Document 3 of 3).

Surface Water Body Aggregate Policy

Document 2 of 3

Government of Alberta

September 2010

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The following parties agree to implement the policy outlined below, as well as the attached implementation plan.

This policy is effective from the date of signature. Amendments may be made at any time by mutual consent and sign-off of the parties below.

Signatures: Participating Organizations

Government of Alberta: Alberta Sustainable Resource Development

Hon. Mel Knight, Minister

Date

Government of Alberta: Alberta Environment

Hon. Rob Renner, Minister

Date

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For the purposes of this policy, the following definitions have been adopted:

Active channel: An 'active channel', as defined in the *Water Act Code of Practice for Watercourse Crossings*, excluding wetlands.

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- Association of the Chemical Profession of Alberta (ACPA)
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Reject: Aggregate that is expected to be unsuitable for use as a product, or for blending with other aggregate to form a product, and is therefore expected to be used for reclamation of the pit.

Surface Water Body: A Water Body, as defined in the *Water Act*, excluding wetlands.

Water Body (*Water Act*): Any location where water flows or is present, whether or not the flow or the presence of water is continuous, intermittent or occurs only during a

flood, and includes but is not limited to wetlands and aquifers but does not include except for clause (nn) and section 99 "water body" that is part of an irrigation works if the irrigation works is subject to a licence and the irrigation works is owned by the licensee, unless the regulations specify that the location is included in the definition of water body.

III. Surface Water Body Aggregate Extraction Policy

A. Purpose

Develop GoA policy to support the provincial regulatory decision-making processes for proposed *aggregate extraction* operations in *active channels* and *non-active* areas of all surface *water bodies*.

B. Authority

This policy gives guidance to reviewing applications for authorizations to initiate aggregate extraction operations under the *Public Lands Act*, the *Water Act*, and the *Environmental Protection and Enhancement Act*.

Although this policy is for aggregate extraction from surface water bodies, excluding wetlands, impacts on aquifers and wetlands will be considered in the risk assessment required of each application.

- In case of contradiction between this policy and any Act, Regulation, or Code, the Act, Regulation, or Code prevails.
- For aggregate extraction from aquifers, refer to Groundwater Evaluation Guidelines
- For aggregate extraction from wetlands, refer to the Alberta wetlands policy [interim policy currently effective; provincial policy currently being developed].

This policy is only applicable to aggregate extraction from surface water bodies.

C. Assumptions and Principles

1. Aggregate extraction in any active channel of a surface water body will have adverse environmental impacts.
2. Aggregate extraction in a non-active area of a surface water body may have adverse environmental impacts if not carried out responsibly.
3. This policy promotes a risk-based approach to aggregate extraction in the non-active area of a surface water body.
4. Applications for authorizations to initiate aggregate extraction from surface water bodies will be processed according to the guidance outlined in this policy, which considers the regulatory mandates of AENV and ASRD.

D. Vision and Outcomes

Surface water body aggregate extraction operations are carried out responsibly to ensure the maintenance and protection of the natural morphology of water body systems, including aquifers and wetlands, the quality of water they contain, and the maintenance of aquatic and terrestrial habitat.

- Aggregate extraction from surface water bodies is permitted to occur only in areas where it will not adversely impact the environment or aquatic ecosystems
- The GoA has a common and consistent approach to applications for authorizations for aggregate extraction from a surface water body
- The roles and responsibilities of regulators are clearly defined.

E. Policy Guidelines for Aggregate Extraction from Surface Water Bodies

1. New Aggregate Extraction Operations

1.1. Active Channel of a Surface Water Body

New aggregate extraction operations proposed within the active channel of a surface water body will not be authorized by AENV or ASRD, with the possible limited exception of preventative and mitigative measures.

1.2. Non-active Area of a Surface Water Body

New aggregate extraction operations proposed within the non-active area of a surface water body will only be considered for authorizations when the proponent provides a risk assessment of the impacts.

Proponents of all aggregate extraction operations must also ensure that all municipal bylaws, provincial and federal regulations, statutes, and policies will be met.

2. Existing Approved Aggregate Extraction Operations

Existing approved aggregated extraction operations will be allowed to continue for the remaining term of their *Public Lands Act*, *Environmental Protection and Enhancement Act*, or *Water Act* authorizations, subject to the requirements under the *Fisheries Act*. After this time, a renewal of an existing authorization will include a plan, where necessary, to bring the existing operation into compliance with the requirements outlined under this policy for new aggregate extraction operations. This may include, but does not necessarily include, a risk assessment.

3. Undeveloped Aggregate Extraction Operations

Undeveloped aggregate extraction operations that have a *Public Lands Act* authorization but no *Environmental Protection and Enhancement Act* or *Water Act* authorizations as of the effective date of this policy will be considered a new aggregate extraction operation and are subject to this Policy as if they are "new" aggregate extraction operations. A risk assessment will be required.

4. Emergency Situations

In rare circumstances, measures to protect human life or critical infrastructure in emergency situations may require aggregate relocation from surface water bodies as part of the emergency response. The various regulatory authorities have appropriate regulations and procedures in place to address emergencies and will review applications for emergency work on a case-by-case basis. This may include, but does not necessarily include, a risk assessment.

Emergency situations will not be viewed as an opportunity to remove aggregate from water bodies for commercial purposes. Any aggregate removal will be strictly incidental to the emergency works and subject to approval conditions of regulatory authorities.

5. Preventative & Mitigative Measures

Occasionally municipalities and other agencies responsible for critical infrastructure may need to conduct activities in the active channel of a surface water body to prevent or mitigate damage to critical infrastructure and avoid future emergency situations. In these situations, time lines are not crucial and normal departmental review procedures can be applied. In some circumstances, aggregate removal and/or relocation may be a component of the works, in which case a risk assessment will be required. However, all reasonable options must be considered and the project will not be treated as an opportunity for aggregate extraction for commercial purposes.

6. Risk Assessments

The risk assessment will evaluate environmental impacts of the proposed operation and define the strategies that will be employed to mitigate or compensate for those impacts. The risk assessment may consider, but is not limited to, the following:

- Fish and wildlife, including aquatic species, terrestrial species, and species at risk
- Land, including vegetation and soils
- Hydrogeology and hydrology, including flood risk and base flow
- River engineering, including channel morphology and bank stability
- Limnology, including water quality and impact on biota
- Wetlands
- The Guidelines for Acquiring Surface Material Dispositions on Public Land (ASRD 2008)
- *Water Act* and *EPEA* requirements and factors the Director must consider when making a decision
- The Risk Management Framework as outlined in the Practitioners Guide to the Risk Management Framework for DFO Habitat Management Staff
- Other requirements identified in the Guidelines for Risk Assessments (to be developed pursuant to this policy by AENV and ASRD)
- Other requirements identified in the Monitoring and Evaluation Plan (to be developed pursuant to this policy by AENV and ASRD)

If the proposed operation includes preventative measures or emergency situations, the proponent is required to assess the effects that the proposed work will have on bank and channel stability of the water body, including upstream and downstream of the proposed operations.

The Risk Assessment, or components thereof, may need to be completed by a *qualified professional*. Refer to the *Guidelines for Risk Assessments*.

Proponents should contact ASRD and AENV for details at the application stage.

F. Guidance on Common Regulatory Instruments

1. Applicable AENV & ASRD Regulations and Guidelines

The applicability of legislation is dependent upon the location of the desired aggregate and, particularly, whether it is associated with public or private lands and/or is near a water body or may influence a water body, including aquifers and wetlands. The primary legislative considerations for surface water body aggregate extraction are listed below.

1.1. Public Lands Act (ASRD)

The *PLA* pertains to the ownership and management of public land, including the beds and shores of watercourses and water bodies. The *PLA* also provides for the allocation of aggregate, royalties, access, and enforcement.

Regulations include:

- Surface Materials Regulation
- Disposition & Fees Regulation

Guidelines include:

- Guidelines for Acquiring Surface Material Dispositions on Public Land (including preparation of a risk assessment)

Possible Operator Requirements:

- Surface materials exploration (SME) permit
- Surface materials lease (SML), licence (SMC), reservation, or public pit licence
Includes risk assessment and payment of fees.
- Licence of Occupation (LOC)
- Conservation and Reclamation Business Plan

1.2. *Environmental Protection and Enhancement Act (AENV)*

The *EPEA* pertains to environmental assessment, approvals, appeals, air and water emissions; conservation and reclamation, and enhancement. This legislation has application on all lands, private or public or water-related.

Regulations include:

- Activities Designation Regulation
- Approvals Procedure Regulation
- Conservation and Reclamation Regulation, including Code of Practice for Pits

Guidelines include:

- Environmental Protection Guidelines for Pits (Conservation & Reclamation Information letter 96-95)

Possible Operator Requirements:

- Registration
For private land pits with potential surface area disturbances exceeding five hectares (Class 1 Pits)
- Reclamation Certificate
Includes Conservation & Reclamation Plan and payment of securities.

1.3. *Water Act (AENV)*

The *WA* pertains to management, use, allocation and environmental protection in conjunction with activities that may influence water. Hence, washing operations diversions, activities in floodplains and creation of water bodies are activities associated with aggregate extraction that may have application.

Regulations include:

- Water (Ministerial) Regulation

Possible Operator Requirements:

- Licence
For diversion of water
- Approval
For the establishment/operation of works in a water body

1.4. *Other Applicable Guidelines*

Aggregate extraction operations should also comply with the following:

- Fish & Wildlife Objectives (ASRD)
- First Nations Consultation Policy (ASRD)
- Alberta First Nations Consultation (AENV)

1.5. Required Applications

The list below includes provincial regulatory authorizations and links to the respective application forms. These applications are always required for initiation of the provincial regulatory review process.

- ASRD Public Lands Act disposition
<http://www.srd.alberta.ca/MapsFormsPublications/Forms/LandsForms/Default.aspx>
- AENV Water Act approval and/or licence
<http://environment.alberta.ca/01189.html>
- AENV EPEA Code of Practice for Pits registration
<http://environment.alberta.ca/01113.html>

It is assumed that each Ministry will share applications with other partner agencies, within the constraints of the *Freedom of Information and Protection of Privacy Act (FOIP)*.

2. Potential Regulatory Requirements

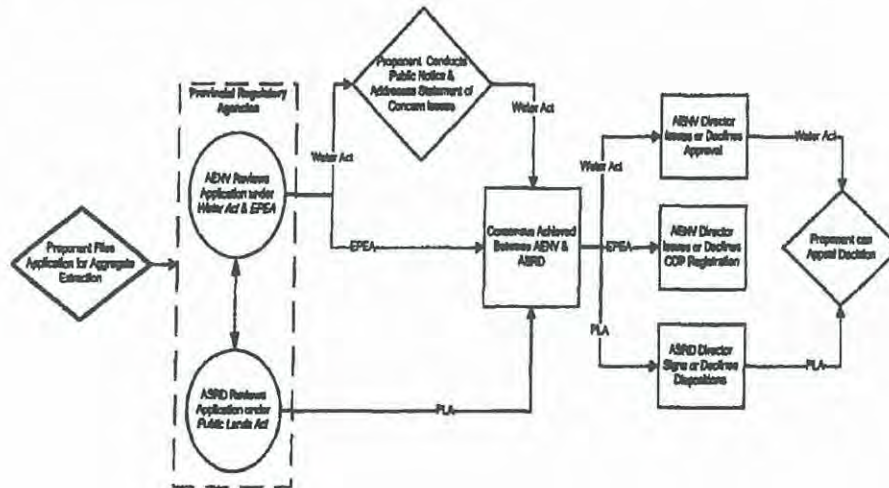
Depending on location and/or scope of the operation, proponents may also need to consider other regulatory requirements, which may include but are not necessarily limited to the following:

Legislation	Organization	Function
<i>Canadian Environmental Assessment Act</i>	Multi-agency (Federal)	Assessment of specified developments that may affect the environment
<i>Fisheries Act</i>	Environment Canada	Regulation of the release of deleterious substances (section 36(3)) for the purposes of protecting fish and fish habitat
	Fisheries and Oceans Canada	Protection of fish and fish habitat
<i>Migratory Birds Convention Act</i>	Environment Canada	Protection of migratory birds
<i>Species at Risk Act</i>	Environment Canada	Protection of terrestrial species designated as 'at risk'
	Fisheries and Oceans Canada	Protection of aquatic species designated as 'at risk'
<i>Navigable Waters Protection Act</i>	Transport Canada	Security of Canada's waters for navigation purposes
<i>Alberta Land Stewardship Act</i>	Alberta Sustainable Resource Development	Provides for the development of regional land use plans

<i>Alberta Wildlife Act</i>	Alberta Sustainable Resource Development	Protection of wildlife
<i>Forest and Prairie Protection Act</i>	Alberta Sustainable Resource Development	Protection and salvage of timber resources on public land
<i>Historical Resources Act</i>	Alberta Department of Culture and Community Spirit	Preservation of historic, archaeological and paleontological resources and sites
<i>Emergency Management Act</i>	Alberta Department of Municipal Affairs	Provides for the disbursement of disaster recovery assistance if the event meets the criteria outlined in Regulation 51/94
<i>Municipal Government Act</i>	Local Municipalities	Provides local municipalities with authority to regulate land use through land use plans, bylaws and development permits.

G. Regulatory Review Process

The flow chart below is intended to show the interactions between the regulatory agencies that are signatories to this policy. It is not intended to illustrate the details of each departmental review process. Each department reviews the application for different components and anticipated impacts, and then issues authorizations based on their own regulatory mandates. However, communication between departments is expected to ensure a consistent and consensus-based decision.



Implementation Plans
Surface Water Body Aggregate Policy
Document 3 of 3

Government of Alberta
September 2010

Implementation Plan

This policy is effective immediately following Ministerial approval from the participating departments. No legislative changes are required.

To further implement the intent of this policy, the following actions are recommended:

I. Coordinate AENV & ASRD regulatory requirements and processes

1. Expand on the Risk Assessment guidelines in the policy to satisfy ASRD & AENV requirements by developing a Guidelines for Risk Assessments document
 - i. Based on current Guidelines for Acquiring Surface Material Dispositions on Public Land (ASRD 2008)
 - ii. Include AENV matters and factors to be considered by the Director when making a decision
 - iii. Maintain consistency with Risk Management Framework as outlined in the Practitioners Guide to the Risk Management Framework for DFO Habitat Management Staff
 - iv. Consider developing format guidelines to improve consistency among proponents
2. Identify operator monitoring and reporting requirements for both ASRD and AENV
3. Strengthen the referral process between ASRD and AENV
4. Clarify roles of regulatory agencies, particularly with respect to emergency situations

II. Engage and educate on the Surface Water body Aggregate Policy

1. GoA Departments;
2. Partners & public;
3. Proponents.

III. Develop a Monitoring and Evaluation Plan for the Surface Water body Aggregate Policy

1. Develop approach and timeline to evaluate efficacy of policy in mitigating environmental effects of aggregate extraction
2. Develop approach and timeline to evaluate intent of policy; consider evolving knowledge and circumstances
3. Update policy as required to incorporate new information
4. Update policy as required to reflect other inter-related provincial policies

From: Andy Lamb
Sent: Tuesday, January 25, 2011 4:22 PM
To: David Helmer; Todd Aasen; Neil Hollands; Jim Steele;
Gerald Feschuk; Martin Paetz; Chiadih Chang; Tom
Slater
Subject: FW: Surface Water Body Aggregate Policy

Follow Up Flag: Follow up
Flag Status: Flagged

FYI

From: Blair Reilly
Sent: Tuesday, January 25, 2011 2:26 PM
To: Martin Foy; Andy Lamb; Shannon Flint
Cc: Greg Carter; Luke Pantin; Jay Litke; Dave Ardell
Subject: Surface Water Body Aggregate Policy

As discussed at Directors, please distribute to staff as you see fit.

Cheers'
Blair

Blair Reilly
Executive Advisor
Alberta Environment- Environmental Operations
Assistant Deputy Minister's Office
Office (780) 415-4811
Fax (780) 422-5141

This communication is intended for the use of the recipient to which it is addressed, and may contain confidential, personal and or privileged information. Please contact us immediately if you are not the intended recipient of this communication, and do not copy, distribute, or take action relying on it. Any communication received in error, or subsequent reply, should be deleted or destroyed.

Background Information & Policy Context
Surface Water Body Aggregate Policy
Document 1 of 3

Government of Alberta
September 2010

List of Acronyms

AAMDC	Alberta Association of Municipal Districts & Counties
AENV	Alberta Environment
ASGA	Alberta Sand and Gravel Association
ASRD	Alberta Sustainable Resource Development
DFO	Fisheries and Oceans Canada
EPEA	<i>Environmental Protection and Enhancement Act</i>
GoA	Government of Alberta
HADD	Harmful Alteration, Disruption, or Destruction
JTIWG	Joint Technical Issues Working Group
LOC	Licence of Occupation
LUF	Land-use Framework
PLA	<i>Public Lands Act</i>
SMC	Surface Materials Licence
SME	Surface Materials Exploration Permit
SML	Surface Materials Lease
WA	<i>Water Act</i>

A. Explanation of Problem & Drivers for Policy

Aggregate extraction within the active and non-active areas of surface water bodies has occurred in the province for decades. The apparent ease of access to the aggregate may have influenced this choice. Aggregate extraction is an important contributor to economic activity in Alberta and there is an increasing demand from local governments and industry to extract aggregate resources from surface water bodies for commercial purposes.

Occasionally there may be demand from local governments to handle aggregate from surface water bodies as a preventative or mitigative measure, or in emergency situations. This demand is often countered by public concern about allowing aggregate extraction operations in surface water bodies, which is why authorizations have not been issued for the past ten years. Although this approach protected the aquatic environment, the public was not given any guidance as to where they can access aggregate resources.

Aggregate extraction in surface water bodies is a concern as the associated operations, in general, have been shown to have significant adverse effects on aquatic species and habitat, water quality, the configuration of the bed, banks and shores of water bodies, and riparian terrestrial habitat. Physical changes to a surface water body as a result of aggregate extraction operations have also been shown to have an adverse effect on adjacent lands and infrastructure, both upstream and downstream of the operation location.

There is no formal provincial policy on surface water body aggregate extraction. A clear and consistent policy to guide review of applications for regulatory authorizations will provide greater clarity for proponents of aggregate extraction operations. The strict approach adopted by this policy will lead to higher environmental protection.

B. Current Regulatory State

1. Municipal

The *Municipal Government Act* (Municipal Affairs) authorizes municipal governments to create bylaws, which may affect aggregate extraction from surface water bodies.

2. Provincial

Aggregate extraction operations on public and private lands in Alberta are regulated under three provincial enactments: the *Water Act* (Alberta Environment), the *Public Lands Act* (Alberta Sustainable Resource Development), and the *Environmental Protection and Enhancement Act* (Alberta Environment). These have separate and distinct regulatory processes that are not always well integrated. Meeting provincial standards and requirements does not ensure that federal regulatory requirements will be met.

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- Develop a Monitoring and Evaluation Plan

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Surface Water Body Aggregate Policy

Document 2 of 3

Government of Alberta

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Hon. Mel Knight, Minister

Date

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Hon. Rob Renner, Minister

Date

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Emergency situation: Any situation that may jeopardize human life or critical infrastructure and where aggregate removal is incidental to the activities required to alleviate that threat.

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Non-active area of a surface water body: Any area in the drainage basin of a surface water body that is not included in the active channel.

Qualified professional: Alberta Environment and Alberta Sustainable Resource Development recognize the following seven professional regulatory organizations (PROs) and whose members may have the scope of practice to conduct risk assessments for proposed aggregate operations:

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- Alberta Society of Professional Biologists (ASPB)
- Association of the Chemical Profession of Alberta (ACPA)
- Association of Professional Engineers and Geologists and Geophysicists of Alberta (APEGGA)
- College of Alberta Professional Foresters (CAPF)
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- Qualified Aquatic Environment Specialist

For specific recommendations see requirements for Reclamation Certification: [<http://environment.alberta.ca/documents/Reclamation-Certificates-Professional-Declaration-Requirements.pdf>] or Code of Practice for Pits.

Reject: Aggregate that is expected to be unsuitable for use as a product, or for blending with other aggregate to form a product, and is therefore expected to be used for reclamation of the pit.

Surface Water Body: A Water Body, as defined in the *Water Act*, excluding wetlands.

Water Body (*Water Act*): Any location where water flows or is present, whether or not the flow or the presence of water is continuous, intermittent or occurs only during a

flood, and includes but is not limited to wetlands and aquifers but does not include except for clause (nn) and section 99 “water body” that is part of an irrigation works if the irrigation works is subject to a licence and the irrigation works is owned by the licensee, unless the regulations specify that the location is included in the definition of water body.

III. Surface Water Body Aggregate Extraction Policy

A. Purpose

Develop GoA policy to support the provincial regulatory decision-making processes for proposed *aggregate extraction* operations in *active channels* and *non-active* areas of all surface *water bodies*.

B. Authority

This policy gives guidance to reviewing applications for authorizations to initiate aggregate extraction operations under the *Public Lands Act*, the *Water Act*, and the *Environmental Protection and Enhancement Act*.

Although this policy is for aggregate extraction from surface water bodies, excluding wetlands, impacts on aquifers and wetlands will be considered in the risk assessment required of each application.

- In case of contradiction between this policy and any Act, Regulation, or Code, the Act, Regulation, or Code prevails.
- For aggregate extraction from aquifers, refer to Groundwater Evaluation Guidelines
- For aggregate extraction from wetlands, refer to the Alberta wetlands policy [interim policy currently effective; provincial policy currently being developed].

This policy is only applicable to aggregate extraction from surface water bodies.

C. Assumptions and Principles

1. Aggregate extraction in any active channel of a surface water body will have adverse environmental impacts.
2. Aggregate extraction in a non-active area of a surface water body may have adverse environmental impacts if not carried out responsibly.
3. This policy promotes a risk-based approach to aggregate extraction in the non-active area of a surface water body.
4. Applications for authorizations to initiate aggregate extraction from surface water bodies will be processed according to the guidance outlined in this policy, which considers the regulatory mandates of AENV and ASRD.

D. Vision and Outcomes

Surface water body aggregate extraction operations are carried out responsibly to ensure the maintenance and protection of the natural morphology of water body systems, including aquifers and wetlands, the quality of water they contain, and the maintenance of aquatic and terrestrial habitat.

- Aggregate extraction from surface water bodies is permitted to occur only in areas where it will not adversely impact the environment or aquatic ecosystems
- The GoA has a common and consistent approach to applications for authorizations for aggregate extraction from a surface water body
- The roles and responsibilities of regulators are clearly defined.

E. Policy Guidelines for Aggregate Extraction from Surface Water Bodies

1. New Aggregate Extraction Operations

1.1. Active Channel of a Surface Water Body

New aggregate extraction operations proposed within the active channel of a surface water body will not be authorized by AENV or ASRD, with the possible limited exception of preventative and mitigative measures.

1.2. Non-active Area of a Surface Water Body

New aggregate extraction operations proposed within the non-active area of a surface water body will only be considered for authorizations when the proponent provides a risk assessment of the impacts.

Proponents of all aggregate extraction operations must also ensure that all municipal bylaws, provincial and federal regulations, statutes, and policies will be met.

2. Existing Approved Aggregate Extraction Operations

Existing approved aggregated extraction operations will be allowed to continue for the remaining term of their *Public Lands Act*, *Environmental Protection and Enhancement Act*, or *Water Act* authorizations, subject to the requirements under the *Fisheries Act*. After this time, a renewal of an existing authorization will include a plan, where necessary, to bring the existing operation into compliance with the requirements outlined under this policy for new aggregate extraction operations. This may include, but does not necessarily include, a risk assessment.

3. Undeveloped Aggregate Extraction Operations

Undeveloped aggregate extraction operations that have a *Public Lands Act* authorization but no *Environmental Protection and Enhancement Act* or *Water Act* authorizations as of the effective date of this policy will be considered a new aggregate extraction operation and are subject to this Policy as if they are “new” aggregate extraction operations. A risk assessment will be required.

4. Emergency Situations

In rare circumstances, measures to protect human life or critical infrastructure in emergency situations may require aggregate relocation from surface water bodies as part of the emergency response. The various regulatory authorities have appropriate regulations and procedures in place to address emergencies and will review applications for emergency work on a case-by-case basis. This may include, but does not necessarily include, a risk assessment.

Emergency situations will not be viewed as an opportunity to remove aggregate from water bodies for commercial purposes. Any aggregate removal will be strictly incidental to the emergency works and subject to approval conditions of regulatory authorities.

5. Preventative & Mitigative Measures

Occasionally municipalities and other agencies responsible for critical infrastructure may need to conduct activities in the active channel of a surface water body to prevent or mitigate damage to critical infrastructure and avoid future emergency situations. In these situations, time lines are not crucial and normal departmental review procedures can be applied. In some circumstances, aggregate removal and/or relocation may be a component of the works, in which case a risk assessment will be required. However, all reasonable options must be considered and the project will not be treated as an opportunity for aggregate extraction for commercial purposes.

6. Risk Assessments

The risk assessment will evaluate environmental impacts of the proposed operation and define the strategies that will be employed to mitigate or compensate for those impacts. The risk assessment may consider, but is not limited to, the following:

- Fish and wildlife, including aquatic species, terrestrial species, and species at risk
- Land, including vegetation and soils
- Hydrogeology and hydrology, including flood risk and base flow
- River engineering, including channel morphology and bank stability
- Limnology, including water quality and impact on biota
- Wetlands
- The Guidelines for Acquiring Surface Material Dispositions on Public Land (ASRD 2008)
- *Water Act* and *EPEA* requirements and factors the Director must consider when making a decision
- The Risk Management Framework as outlined in the Practitioners Guide to the Risk Management Framework for DFO Habitat Management Staff
- Other requirements identified in the Guidelines for Risk Assessments (to be developed pursuant to this policy by AENV and ASRD)
- Other requirements identified in the Monitoring and Evaluation Plan (to be developed pursuant to this policy by AENV and ASRD)

If the proposed operation includes preventative measures or emergency situations, the proponent is required to assess the effects that the proposed work will have on bank and channel stability of the water body, including upstream and downstream of the proposed operations.

The Risk Assessment, or components thereof, may need to be completed by a *qualified professional*. Refer to the Guidelines for Risk Assessments.

Proponents should contact ASRD and AENV for details at the application stage.

F. Guidance on Common Regulatory Instruments

1. Applicable AENV & ASRD Regulations and Guidelines

The applicability of legislation is dependent upon the location of the desired aggregate and, particularly, whether it is associated with public or private lands and/or is near a water body or may influence a water body, including aquifers and wetlands. The primary legislative considerations for surface water body aggregate extraction are listed below.

1.1. Public Lands Act (ASRD)

The *PLA* pertains to the ownership and management of public land, including the beds and shores of watercourses and water bodies. The *PLA* also provides for the allocation of aggregate, royalties, access, and enforcement.

Regulations include:

- Surface Materials Regulation
- Disposition & Fees Regulation

Guidelines include:

- Guidelines for Acquiring Surface Material Dispositions on Public Land (including preparation of a risk assessment)

Possible Operator Requirements:

- Surface materials exploration (SME) permit
- Surface materials lease (SML), licence (SMC), reservation, or public pit licence
Includes risk assessment and payment of fees.
- Licence of Occupation (LOC)
- Conservation and Reclamation Business Plan

1.2. Environmental Protection and Enhancement Act (AENV)

The *EPEA* pertains to environmental assessment, approvals, appeals, air and water emissions; conservation and reclamation, and enhancement. This legislation has application on all lands, private or public or water-related.

Regulations include:

- Activities Designation Regulation
- Approvals Procedure Regulation
- Conservation and Reclamation Regulation, including Code of Practice for Pits

Guidelines include:

- Environmental Protection Guidelines for Pits (Conservation & Reclamation Information letter 96-95)

Possible Operator Requirements:

- Registration
For private land pits with potential surface area disturbances exceeding five hectares (Class 1 Pits)
- Reclamation Certificate
Includes Conservation & Reclamation Plan and payment of securities.

1.3. Water Act (AENV)

The *WA* pertains to management, use, allocation and environmental protection in conjunction with activities that may influence water. Hence, washing operations diversions, activities in floodplains and creation of water bodies are activities associated with aggregate extraction that may have application.

Regulations include:

- Water (Ministerial) Regulation

Possible Operator Requirements:

- Licence
For diversion of water
- Approval
For the establishment/operation of works in a water body

1.4. Other Applicable Guidelines

Aggregate extraction operations should also comply with the following:

- Fish & Wildlife Objectives (ASRD)
- First Nations Consultation Policy (ASRD)
- Alberta First Nations Consultation (AENV)

1.5. Required Applications

The list below includes provincial regulatory authorizations and links to the respective application forms. These applications are always required for initiation of the provincial regulatory review process.

- ASRD Public Lands Act disposition
<http://www.srd.alberta.ca/MapsFormsPublications/Forms/LandsForms/Default.aspx>
- AENV Water Act approval and/or licence
<http://environment.alberta.ca/01189.html>
- AENV EPEA Code of Practice for Pits registration
<http://environment.alberta.ca/01113.html>

It is assumed that each Ministry will share applications with other partner agencies, within the constraints of the *Freedom of Information and Protection of Privacy Act (FOIP)*.

2. Potential Regulatory Requirements

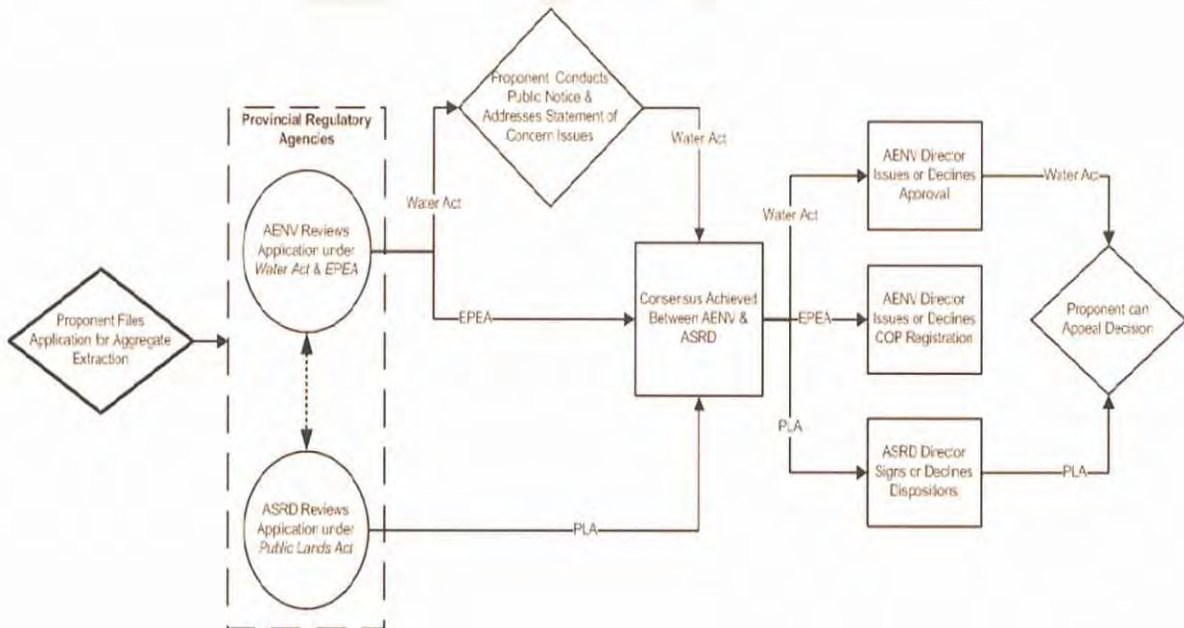
Depending on location and/or scope of the operation, proponents may also need to consider other regulatory requirements, which may include but are not necessarily limited to the following:

Legislation	Organization	Function
<i>Canadian Environmental Assessment Act</i>	Multi-agency (Federal)	Assessment of specified developments that may affect the environment
<i>Fisheries Act</i>	Environment Canada	Regulation of the release of deleterious substances (section 36(3)) for the purposes of protecting fish and fish habitat
	Fisheries and Oceans Canada	Protection of fish and fish habitat
<i>Migratory Birds Convention Act</i>	Environment Canada	Protection of migratory birds
<i>Species at Risk Act</i>	Environment Canada	Protection of terrestrial species designated as 'at risk'
	Fisheries and Oceans Canada	Protection of aquatic species designated as 'at risk'
<i>Navigable Waters Protection Act</i>	Transport Canada	Security of Canada's waters for navigation purposes
<i>Alberta Land Stewardship Act</i>	Alberta Sustainable Resource Development	Provides for the development of regional land use plans
<i>Alberta Wildlife Act</i>	Alberta Sustainable Resource Development	Protection of wildlife

<i>Forest and Prairie Protection Act</i>	Alberta Sustainable Resource Development	Protection and salvage of timber resources on public land
<i>Historical Resources Act</i>	Alberta Department of Culture and Community Spirit	Preservation of historic, archaeological and paleontological resources and sites
<i>Emergency Management Act</i>	Alberta Department of Municipal Affairs	Provides for the disbursement of disaster recovery assistance if the event meets the criteria outlined in Regulation 51/94
<i>Municipal Government Act</i>	Local Municipalities	Provides local municipalities with authority to regulate land use through land use plans, bylaws and development permits.

G. Regulatory Review Process

The flow chart below is intended to show the interactions between the regulatory agencies that are signatories to this policy. It is not intended to illustrate the details of each departmental review process. Each department reviews the application for different components and anticipated impacts, and then issues authorizations based on their own regulatory mandates. However, communication between departments is expected to ensure a consistent and consensus-based decision.



Implementation Plans
Surface Water Body Aggregate Policy
Document 3 of 3

Government of Alberta
September 2010

Implementation Plan

This policy is effective immediately following Ministerial approval from the participating departments. No legislative changes are required.

To further implement the intent of this policy, the following actions are recommended:

I. Coordinate AENV & ASRD regulatory requirements and processes

1. Expand on the Risk Assessment guidelines in the policy to satisfy ASRD & AENV requirements by developing a Guidelines for Risk Assessments document
 - i. Based on current Guidelines for Acquiring Surface Material Dispositions on Public Land (ASRD 2008)
 - ii. Include AENV matters and factors to be considered by the Director when making a decision
 - iii. Maintain consistency with Risk Management Framework as outlined in the Practitioners Guide to the Risk Management Framework for DFO Habitat Management Staff
 - iv. Consider developing format guidelines to improve consistency among proponents
2. Identify operator monitoring and reporting requirements for both ASRD and AENV
3. Strengthen the referral process between ASRD and AENV
4. Clarify roles of regulatory agencies, particularly with respect to emergency situations

II. Engage and educate on the Surface Water body Aggregate Policy

1. GoA Departments;
2. Partners & public;
3. Proponents.

III. Develop a Monitoring and Evaluation Plan for the Surface Water body Aggregate Policy

1. Develop approach and timeline to evaluate efficacy of policy in mitigating environmental effects of aggregate extraction
2. Develop approach and timeline to evaluate intent of policy; consider evolving knowledge and circumstances
3. Update policy as required to incorporate new information
4. Update policy as required to reflect other inter-related provincial policies

Terry Kosinski

From: Terry Kosinski
Sent: Wednesday, January 26, 2011 8:59 AM
To: Sue Cotterill
Subject: RE: Scanned document - Surface Water Body Aggregate Policy

I'll be sending a few comments about our role in this initiative.

Terry

From: Sue Cotterill
Sent: Wednesday, January 26, 2011 7:43 AM
To: Terry Kosinski
Subject: RE: Scanned document - Surface Water Body Aggregate Policy

I do not know, but I can check with Lands.

S

From: Terry Kosinski
Sent: Tuesday, January 25, 2011 5:27 PM
To: Sue Cotterill
Subject: RE: Scanned document - Surface Water Body Aggregate Policy

Did the same memo go to Public Lands? They were involved on the committee with AENV.

Terry **Duplicate of email dated Jan. 25, 2011 10:54AM & Jan. 25, 2011 10:12AM, removed as non-responsive.**

Debbie Reich

From: Kevin Wilkinson
Sent: Friday, February 18, 2011 10:35 AM
To: Augustus Archampong
Subject: RE: Aggregate Extraction Policy_v9 No WtMrk.doc

Thanks Archie.

I will discuss with Pauline. My advice to her and to PWQCT will be to wait for a communication piece from the policy branch (Colin) that will include Ernie's Jan 13 memo, a copy of the policy, and a copy of the implementation plan.

Kevin Duplicate of email dated Feb. 18 2010 10:20AM, removed as non-responsive.

From: Neil Hollands
Sent: Friday, February 18, 2011 2:04 PM
To: Ryan Puhlmann; Lesley Foy
Cc: Muhammad Aziz; Steve Cook
Subject: FW: Aggregate Extraction Policy_v9 No WtMrk.doc

Ryan and Lesley,

Coincidentally, look what just came in the email. I didn't check to see whether what I sent you this morning is the same version, but delete this mornings file and use this one.

We need to re-initiate discussions with Brazeau County. I think I had suggested that Lesley contact the County so we can meet with them and explain the policy, and the County can indicate to us which sites they want to apply for.

Neil

From: Andy Lamb
Sent: Friday, February 18, 2011 1:29 PM
To: David Helmer; Neil Hollands; Todd Aasen
Subject: FW: Aggregate Extraction Policy_v9 No WtMrk.doc

You guys may have got this info from Archie already but here is the latest on the Aggregate Extraction Policy. The policy is still not signed and it is not clear when it will be but according to Archie it is now "official".

Andy Lamb, Director
Central Region, Alberta Environment
#304, 4920-51 Street, Red Deer AB
Phone: (403) 340-4326 Fax (403) 340-5022

From: Martin Foy
Sent: Friday, February 18, 2011 11:01 AM
To: Shannon Flint; Andy Lamb; Dave Ardell
Cc: Blair Reilly
Subject: FW: Aggregate Extraction Policy_v9 No WtMrk.doc

Hey...

Kevin looked into the implementation o the aggregate extraction policy further and apparently we got the wrong version of the policy. The right one and Policy's plan moving forward is below. M

From: Augustus Archampong
Sent: Friday, February 18, 2011 10:20 AM
To: Kevin Wilkinson
Subject: Aggregate Extraction Policy_v9 No WtMrk.doc

Kevin, this is the Nov. version of the policy. An October version was previously sent out inadvertently.

Colin and I will discuss how we may communicate the "policy next steps" to MLA Diana McQueen of Brazeau county; she is one of the supporters of this policy.

There is also the need to develop communication protocol to the regions, relative to policy implementation; you and I discussed this briefly.

As mentioned, the policy document is not signed but Ernie's Jan, 13 transmittal memo to Rick Brown indicates the policy is official. I will get a copy of this memo for you later.

Pauline Scoffield has also contacted me on this subject; please address her questions on my behalf, if it's okay.

Please let me know if you have further questions

Cheers, Archie.

Background, Context, & Future Work
Surface Water Body Aggregate Policy
Document 1 of 2

Government of Alberta
November 2010

List of Acronyms

AAMDC	Alberta Association of Municipal Districts & Counties
AENV	Alberta Environment
ASGA	Alberta Sand and Gravel Association
ASRD	Alberta Sustainable Resource Development
DFO	Fisheries and Oceans Canada
EPEA	<i>Environmental Protection and Enhancement Act</i>
GoA	Government of Alberta
HADD	Harmful Alteration, Disruption, or Destruction
JTIWG	Joint Technical Issues Working Group
LOC	Licence of Occupation
LUF	Land-use Framework
PLA	<i>Public Lands Act</i>
SMC	Surface Materials Licence
SME	Surface Materials Exploration Permit
SML	Surface Materials Lease
WA	<i>Water Act</i>

A. Explanation of Problem & Drivers for Policy

Aggregate operations, which includes extraction and redistribution, within the active and non-active areas of surface water bodies has occurred in the province for decades; the apparent ease of access to the aggregate may have influenced this choice. Aggregate operations are an important contributor to economic activity in Alberta and there is an increasing demand from local governments and industry to extract aggregate resources from surface water bodies for commercial purposes. Occasionally there may be demand from local governments to redistribute aggregate within surface water bodies as a preventative or mitigative measure, or in emergency situations.

This demand is often countered by public concern about allowing aggregate operations in surface water bodies, which is why authorizations have not been issued for the past ten years. Although this approach protected the aquatic environment, the public was not given any guidance as to where they can access aggregate resources.

Aggregate operations within the active channel of surface water bodies is a concern as the associated activities have been shown to have significant adverse effects on aquatic species and habitat, water quality, the configuration of the bed, banks and shores of water bodies, and riparian terrestrial habitat. Physical changes to a surface water body as a result of aggregate operations have also been shown to have an adverse effect on adjacent lands and infrastructure, both upstream and downstream of the operation location. Depending on proximity, aggregate operations in areas outside the active channel could have an effect on fish and fish habitat. Operational procedures and best management practices are required to mitigate such possible impacts.

There is no formal provincial policy on aggregate operations within a surface water body. A clear and consistent policy to guide review of applications for regulatory authorizations will provide greater clarity for proponents of aggregate operations. The approach adopted by this policy will lead to broader environmental protection.

B. Current Regulatory State

1. Municipal

The *Municipal Government Act* (Municipal Affairs) authorizes municipal governments to create bylaws, which may affect aggregate operations within surface water bodies.

2. Provincial

Aggregate operations on public and private lands in Alberta are regulated under three provincial enactments: the *Water Act* (Alberta Environment), the *Public Lands Act* (Alberta Sustainable Resource Development), and the *Environmental Protection and Enhancement Act* (Alberta Environment). These have separate and distinct regulatory processes.

3. Federal

Aggregate operations situated in the active and/or non-active areas of surface water bodies must also meet federal regulatory requirements under the *Fisheries Act*, the *Navigable Waters Protection Act*, and possibly the *Canadian Environmental Assessment Act* or the *Species at Risk Act*.

Any work or undertaking that causes the harmful alteration, disruption or destruction (HADD) of fish habitat is prohibited unless authorized under the federal *Fisheries Act*. DFO will review proposed works or undertakings using the Risk Management Framework as outlined in the *Practitioners Guide to the Risk Management Framework for DFO Habitat Management Staff*. DFO may choose NOT to issue an authorization where:

- the magnitude and duration of the HADD is unacceptable;
- the fish habitat affected is critical to the maintenance of fish populations;
- the works or undertakings would result in the deposit of a deleterious substance into fish bearing habitat;
- no acceptable compensation (to replace affected fish habitat) can be achieved.

If an authorization is required, the potential environmental effects of the project must also be assessed pursuant to the *Canadian Environmental Assessment Act*. If it is determined that 'no significant adverse environmental effects' will occur, a *Fisheries Act* authorization may be considered.

This approach is consistent with the objectives of ASRD, under the *Public Lands Act*, and AENV, under the *Water Act* and the *Environmental Protection and Enhancement Act*, who are required to consider the protection of the aquatic environment when issuing authorizations.

In the past 10 years, DFO has declined issuing authorizations in Alberta under the *Fisheries Act* (Canada) for extraction within the active channel of fish-bearing surface water bodies. AENV and ASRD similarly have not issued any provincial approvals.

4. Other Jurisdictions

Aggregate extraction from the active area of surface water bodies "has been prohibited in the United Kingdom, Germany, France, The Netherlands, and Switzerland and is being reduced in rivers in Italy, Portugal, and New Zealand".

[Source: Kondolf, G.M (1997) Hungry water: effects of dams and gravel mining on river channels. *Environ. Manage.* 21:533-551. IN Meador and Layher (1998) Instream sand and gravel mining: Environmental issues and regulatory process in the United States. *Fisheries Habitat.* 23(11): 6-13.]

C. Relationship to GoA Strategic Policy

1. Land-use Framework (LUF)

The Surface Water Body Aggregate Policy:

- Provides guidance to LUF regional plans as to where aggregate operations within surface water bodies may be acceptable.
- Enables 'place-based' responses to regulatory applications for aggregate operations, but provides a provincially consistent policy to determine whether or not the operation would be acceptable in the provincial policy and regulatory contexts.
- Articulates a consistent policy so that the cumulative effects of aggregate operations are considered and managed.
- Is applicable to public and private lands.

Relevant LUF Strategies:

- Strategy 1: Develop seven regional land-use plans based on seven new land-use regions.
- Strategy 3: Cumulative effects management will be used at the regional level to manage the impacts of development on land, water, and air.
- Strategy 4: Develop a strategy for conservation and stewardship on private and public lands

2. Water for Life Strategy

The Surface Water Body Aggregate Policy:

- Supports the Healthy Aquatic Ecosystems outcome of the Water for Life Strategy.

Relevant Water for Life Action Plan items:

- Action 2.1: Enforce protection of known critical aquatic ecosystems using existing legislation
- Action 2.6: Implement aquatic restoration plan and conserve key aquatic ecosystems through regional land-use approaches and identified partnerships

D. Work to Date

To date, no provincial policy for aggregate operations within surface water bodies has been developed, although several attempts have been made in the past. Recently, the Joint Technical Issues Working Group (JTIWG) has provided recommendations (March 31 2010) pertaining to aggregate extraction in the active area of surface water bodies. Their role is to facilitate consistent federal and provincial approaches to regulatory processes. The consensus of the JTIWG is to continue the moratorium on applications for commercial aggregate extraction projects within the active channel.

E. Current Work

Alberta's Minister of Environment requested that a GoA policy be developed to transparently and consistently regulate at the provincial level aggregate operations within surface water bodies. AENV led the development of the GoA's position in partnership with ASRD. Terms of Reference were drafted and the parties indicated below were included in the development of the attached Surface Water Body Aggregate Policy (Document 2 of 2).

Sector	Target audiences	Outcome of consultation	Methods of consultation
AENV	Water Policy Branch; Regional Staff; River Forecasting; First Nations advisors; Legal Services	Surface Water body Aggregate Policy	Committee Representation; Meetings; Email requests for comments
ASRD	Fish & Wildlife Division; Lands Division	Surface Water body Aggregate Policy	Committee Representation; Meetings; Email requests for comments
Other GoA Ministries	Alberta Transportation	Awareness of policy changes & understanding of required process.	Committee Representation
Federal Regulatory Agencies	DFO	Ensure consistency with DFO legislation. Awareness of policy changes & understanding of required process.	Committee Representation
Municipal and Local Governments	AAMDC	Awareness of policy changes & understanding of required process.	Committee Representation
Other Proponents	ASGA	Awareness of policy changes & understanding of required process.	Committee Representation

F. Future Work Requirements

- Develop pre-assessment requirements, risk assessment triggers, and best management practices. Consider content and format requirements.
- Develop a detailed process flow chart for proponents.
- Engage and educate stakeholders on the new Surface Water body Aggregate Policy, including internal staff, proponents, partners, and the public.
- Develop a Monitoring and Evaluation Plan for the Surface Water body Aggregate Policy.

Completion of these requirements will require substantial time and resources. Therefore it is recommended that a detailed implementation plan be developed as an inter-departmental (AENV & ASRD) priority so that resources can be allocated and committed to the completion of this project.

Surface Water Body Aggregate Policy

Document 2 of 2

Government of Alberta

November 2010

I. Endorsement

The following parties agree to implement the policy outlined below.

This policy is effective from the date of signature. Amendments may be made at any time by mutual consent and sign-off of the parties below.

Signatures: Participating Organizations

Government of Alberta: Alberta Sustainable Resource Development

Hon. Mel Knight, Minister

Date

Government of Alberta: Alberta Environment

Hon. Rob Renner, Minister

Date

II. Glossary

For the purposes of this policy, the following definitions have been adopted:

Active channel: An 'active channel', as defined in the *Water Act Code of Practice for Watercourse Crossings*, excluding wetlands.

Aggregate: Any sand, gravel, clay or marl that is excavated from a pit, whether in a processed or unprocessed form, but does not include *reject*.

Emergency situation: Any situation that may jeopardize human life or critical infrastructure and where aggregate removal is incidental to the activities required to alleviate that threat.

Extraction: Includes the stripping and stockpiling of soil, overburden, and aggregate materials and the transport of said materials within the site.

Non-active area of a surface water body: Any area of a surface water body that is not included in the active channel.

Operations: Include extraction and redistribution.

Qualified professional: Under this policy, Alberta Environment and Alberta Sustainable Resource Development recognize the following six professional regulatory organizations (PROs) whose members may have the scope of practice to conduct complete or partial risk assessments for proposed aggregate operations:

- Alberta Institute of Agrologists (AIA)
- Alberta Society of Professional Biologists (ASPB)
- Association of the Chemical Profession of Alberta (ACPA)
- Association of Professional Engineers and Geologists and Geophysicists of Alberta (APEGGA)
- College of Alberta Professional Foresters (CAPF)
- College of Alberta Professional Forest Technologists (CAPFT)

Redistribution: The movement of aggregate from one site to another for preventative, mitigative, or emergency purposes.

Reject: Aggregate that is expected to be unsuitable for use as a product, or for blending with other aggregate to form a product, and is therefore expected to be used for reclamation of the pit.

Surface Water Body: A Water Body, as defined in the *Water Act*, excluding wetlands.

Water Body (*Water Act*): Any location where water flows or is present, whether or not the flow or the presence of water is continuous, intermittent or occurs only during a

flood, and includes but is not limited to wetlands and aquifers but does not include except for clause (nn) and section 99 “water body” that is part of an irrigation works if the irrigation works is subject to a licence and the irrigation works is owned by the licensee, unless the regulations specify that the location is included in the definition of water body.

III. Surface Water Body Aggregate Extraction Policy

A. Purpose

Articulate GoA policy to support the provincial regulatory decision-making processes for proposed *aggregate* operations, including *extraction* and *redistribution*, in *active channels* and *non-active* areas of all surface *water bodies*.

B. Authority

This policy gives guidance to reviewing applications for authorizations to initiate aggregate operations under the *Public Lands Act*, the *Water Act*, and the *Environmental Protection and Enhancement Act*.

Although this policy is for aggregate operations within surface water bodies, excluding wetlands, impacts on aquifers and wetlands should be considered in a pre-assessment and/or formal risk assessment when applicable.

- In case of contradiction between this policy and any Act, Regulation, or Code, the Act, Regulation, or Code prevails.
- For aggregate extraction from aquifers, refer to Groundwater Evaluation Guidelines.
- For aggregate extraction from wetlands, refer to the Alberta Wetlands Policy.

This policy is only applicable to aggregate operations within surface water bodies.

C. Assumptions and Principles

1. Aggregate extraction in any active channel of a surface water body will have adverse environmental impacts.
2. Aggregate extraction in a non-active area of a surface water body may have adverse environmental impacts if not carried out responsibly.
3. This policy promotes a risk-based approach to aggregate operations in the non-active area and aggregate redistribution in the active channel of a surface water body.
4. Applications for authorizations to initiate aggregate operations within surface water bodies will be processed according to the guidance outlined in this policy, which considers the regulatory mandates of AENV and ASRD.

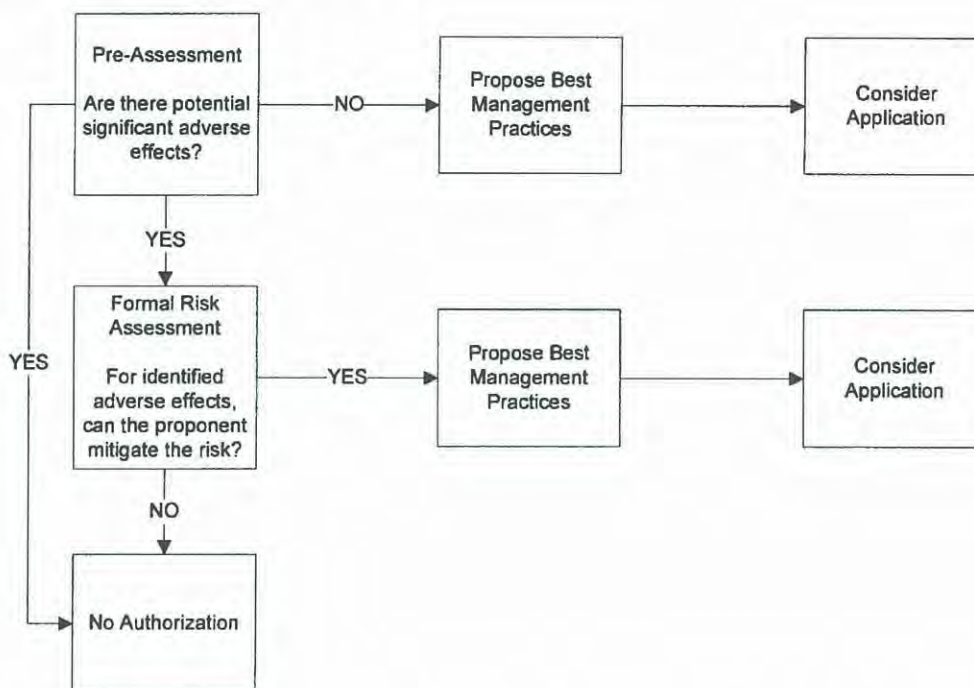
D. Vision and Outcomes

Surface water body aggregate operations are carried out responsibly to ensure the maintenance and protection of the natural morphology of water body systems, including aquifers and wetlands, the quality of water they contain, and the maintenance of aquatic and terrestrial habitat.

- Aggregate extraction from and relocation within surface water bodies is permitted to occur only in areas where it will not adversely impact the environment or aquatic ecosystems.
- The GoA has a common and consistent approach to applications for authorizations for aggregate operations within a surface water body
- The roles and responsibilities of regulators are clearly defined.

E. Policy Guidelines for Aggregate Operations within Surface Water Bodies

1. Decision-Making Framework



Regulatory instruments commonly triggered by aggregate operations in surface water bodies are described in Section F and could be used as guidance when determining potential significant adverse effects. The list in Section F is not exhaustive; the responsibility to thoroughly assess each site remains with the proponent. Proponents of all aggregate extraction operations must ensure that all municipal bylaws, provincial and federal regulations, statutes, and policies will be met.

2. New Aggregate Operations

2.1. Active Channel of a Surface Water Body

New aggregate operations proposed within the active channel of a surface water body will not be authorized by AENV or ASRD, with the possible limited exception of preventative and mitigative measures.

2.2. Non-active Area of a Surface Water Body

New aggregate operations proposed within the non-active area of a surface water body will only be considered for authorizations when the proponent identifies and mitigates possible significant adverse effects as per the process in Section 1, Decision-Making Framework.

3. Existing Approved Aggregate Operations

Existing approved aggregate operations will be allowed to continue for the remaining term of their *Public Lands Act*, *Environmental Protection and Enhancement Act*, or *Water Act* authorizations, subject to the requirements under the *Fisheries Act*. After this time, a renewal of an existing authorization will include a plan, where necessary, to bring the existing operation into compliance with the requirements outlined under this policy for new aggregate operations. This may include, but does not necessarily include, a risk assessment to address potential significant adverse effects.

4. Undeveloped Aggregate Operations

Undeveloped aggregate operations that have a *Public Lands Act* authorization but no *Environmental Protection and Enhancement Act* or *Water Act* authorizations as of the effective date of this policy will be considered a new aggregate operation and are subject to this Policy as if they are "New Aggregate Operations". A risk assessment may be required to address potential significant adverse effects.

5. Emergency Situations

In rare circumstances, measures to protect human life or critical infrastructure in emergency situations may require aggregate redistribution within surface water bodies as part of the emergency response. Aggregate extraction will not be permitted. The various regulatory authorities have appropriate regulations and procedures in place to address emergencies; the regulators should be contacted immediately. The proposed emergency work will be considered on a case-by-case basis.

6. Preventative & Mitigative Measures

Occasionally municipalities and other agencies responsible for critical infrastructure may need to conduct activities to prevent or mitigate damage to critical infrastructure and avoid future emergency situations. In these circumstances, relocation of aggregate materials within the active channel may be considered when the procedure in Section 1, Decision-Making Framework, is followed. The proponent will be required to assess the effects that the proposed work will have on bank and channel stability, including upstream and downstream of the proposed operations.

7. Best Management Practices (BMPs)

Where pre-assessment or formal risk assessment determines there will be no significant adverse effects, or that the effects can be adequately mitigated, BMPs must be implemented. BMPs are available in the following documents; all documents are as amended from time to time:

- Guide to the Code of Practice for Pits (AENV 2004)
- Environmental Protection Guidelines for Pits (AENV 1996, C&R/IL/96-5)
- Guidelines for Acquiring Surface Material Dispositions on Public Land (ASRD 2008)
- Best Management Practices User Manual for Aggregate Operators on Public Land (ASRD 2010)

8. Formal Risk Assessments

Formal risk assessments may be required when significant adverse effects are identified in the pre-assessment. When triggered, the formal risk assessment should include the strategies that will be employed to mitigate or compensate for those impacts, particularly for when existing or proposed BMPs are determined to be inadequate. The formal risk assessment must be completed by, or under the supervision of, a *qualified professional*.

The risk assessment may consider, but is not limited to, the following:

- Fish and wildlife, including aquatic species, terrestrial species, and species at risk
- Land, including vegetation and soils
- Hydrogeology and hydrology, including flood risk and base flow
- River engineering, including channel morphology and bank stability
- Water quality and impact on biota
- Wetlands
- *Water Act* and *EPEA* requirements and factors the Director must consider when making a decision

F. Guidance on Common Regulatory Instruments

1. Applicable AENV & ASRD Regulations and Guidelines

The applicability of legislation is dependent upon the location of the desired aggregate and, particularly, whether it is associated with public or private lands and/or is near a water body or may influence a water body, including aquifers and wetlands. The primary legislative considerations for surface water body aggregate operations are listed below.

1.1. *Public Lands Act* (ASRD)

The *PLA* pertains to the ownership and management of public land, including the beds and shores of watercourses and water bodies. The *PLA* also provides for the allocation of aggregate, royalties, access, and enforcement.

Regulations include:

- Disposition & Fees Regulation

Guidelines include:

- Guidelines for Acquiring Surface Material Dispositions on Public Land

Possible Operator Requirements:

- Surface materials exploration (SME) permit

- Surface materials lease (SML), licence (SMC), reservation, or public pit licence
- Licence of Occupation (LOC)
- Conservation and Reclamation Business Plan

1.2. *Environmental Protection and Enhancement Act (AENV)*

The *EPEA* pertains to environmental assessment, approvals, appeals, air and water emissions, conservation and reclamation, and enhancement. This legislation has application on all lands, private or public or water-related.

Regulations include:

- Activities Designation Regulation
- Approvals and Registrations Procedure Regulation
- Conservation and Reclamation Regulation, including Code of Practice for Pits

Guidelines include:

- Environmental Protection Guidelines for Pits (Conservation & Reclamation Information letter 96-95)

Possible Operator Requirements:

- Registration
For private land pits with potential surface area disturbances exceeding five hectares (Class 1 Pits)
- Reclamation Certificate
Includes Conservation & Reclamation Plan

1.3. *Water Act (AENV)*

The *WA* pertains to management, use, allocation and environmental protection in conjunction with activities that may influence water. Hence, washing operations, diversions, activities in floodplains and creation of water bodies are activities associated with aggregate operations that may require an authorization.

Regulations include:

- Water (Ministerial) Regulation

Possible Operator Requirements:

- Licence
For diversion of water
- Approval
For the establishment/operation of works in a water body

1.4. Other Applicable Guidelines

Aggregate operations must also comply with the following:

- Fish & Wildlife Objectives (ASRD)
- First Nations Consultation Policy (ASRD)
- Alberta First Nations Consultation (AENV)

1.5. Required Applications

The list below includes provincial regulatory authorizations and links to the respective application forms. These applications are always required for initiation of the provincial regulatory review process.

- ASRD Public Lands Act disposition
<http://www.srd.alberta.ca/MapsFormsPublications/Forms/LandsForms/Default.aspx>
- AENV Water Act approval and/or licence
<http://environment.alberta.ca/01189.html>
- AENV EPEA Code of Practice for Pits registration
<http://environment.alberta.ca/01113.html>

Each Ministry will share applications with other agencies as required, within the constraints of the *Freedom of Information and Protection of Privacy Act (FOIP)*.

2. Potential Regulatory Requirements

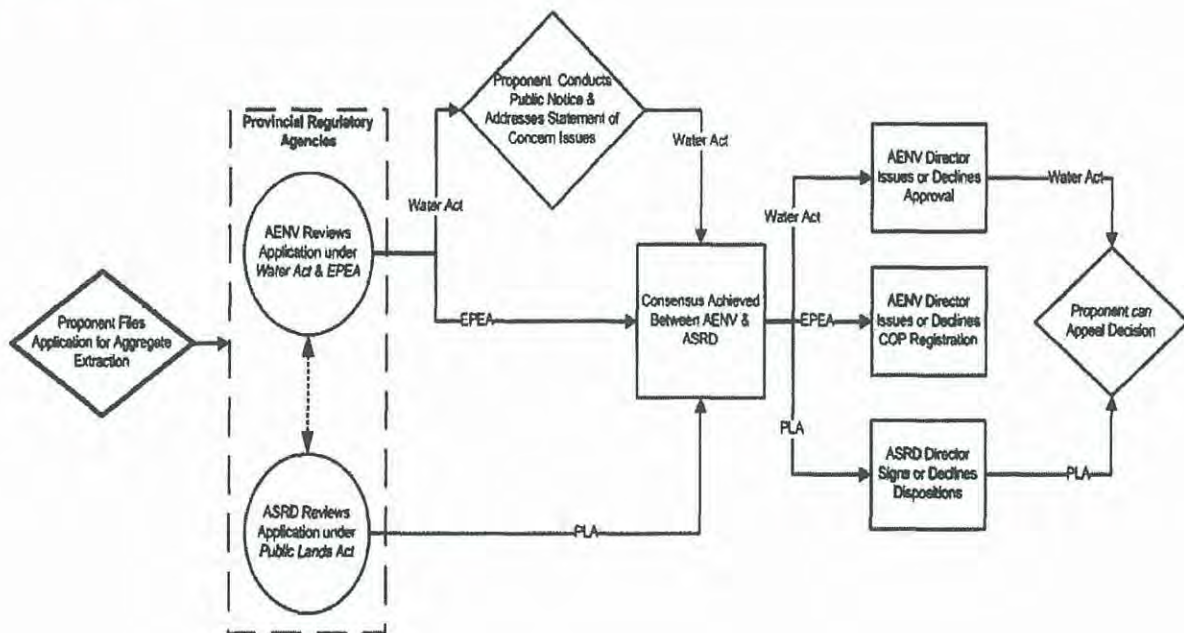
Depending on the location and/or scope of the operation, proponents may also need to consider other regulatory requirements, which may include but are not necessarily limited to the following:

Legislation	Organization	Function
<i>Canadian Environmental Assessment Act</i>	Multi-agency (Federal)	Assessment of specified developments that may affect the environment
<i>Fisheries Act</i>	Environment Canada	Regulation of the release of deleterious substances (section 36(3)) for the purposes of protecting fish and fish habitat
	Fisheries and Oceans Canada	Protection of fish and fish habitat
<i>Migratory Birds Convention Act</i>	Environment Canada	Protection of migratory birds
<i>Species at Risk Act</i>	Environment Canada	Protection of terrestrial species designated as 'at risk'
	Fisheries and Oceans Canada	Protection of aquatic species designated as 'at risk'
<i>Navigable Waters Protection Act</i>	Transport Canada	Security of Canada's waters for navigation purposes
<i>Alberta Land Stewardship Act</i>	Alberta Sustainable Resource Development	Provides for the development of regional land use plans
<i>Alberta Wildlife Act</i>	Alberta Sustainable Resource Development	Protection of wildlife
<i>Forest and Prairie Protection Act</i>	Alberta Sustainable Resource Development	Protection and salvage of timber resources on public land
<i>Historical Resources Act</i>	Alberta Department of Culture and Community Spirit	Preservation of historic, archaeological and paleontological resources and sites
<i>Emergency Management Act</i>	Alberta Department of Municipal Affairs	Provides for the disbursement of disaster recovery assistance if the event meets the criteria outlined in

		Regulation 51/94
<i>Municipal Government Act</i>	Local Municipalities	Provides local municipalities with authority to regulate land use through land use plans, bylaws and development permits

G. Regulatory Review Process

The flow chart below is intended to show the interactions between AENV and ASRD. It is not intended to illustrate the details of each departmental review process. Each department reviews the application for different components and anticipated impacts, and then issues authorizations based on their own regulatory mandates. However, communication between departments is expected to ensure a consistent and consensus-based decision.



From: Andy Lamb
Sent: Monday, February 28, 2011 3:44 PM
To: David Helmer; Neil Hollands; Todd Aasen
Cc: Jim Steele; Chiadih Chang; Tom Slater
Subject: FW: Aggregate Policy
Attachments: DOC022811.pdf; Background Information_v9.doc; Aggregate
Extraction Policy_v9 No WtMrk.doc

Follow Up Flag: Follow up
Flag Status: Flagged

If you have not received this yet here is the final version of the policy - still not signed...

Andy Lamb, Director
Central Region, Alberta Environment
#304, 4920-51 Street, Red Deer AB
Phone: (403) 340-4326 Fax (403) 340-5022

-----Original Message-----

From: Blair Reilly
Sent: Monday, February 28, 2011 12:16 PM
To: _AENV-EM-Directors
Subject: Aggregate Policy

Here are the final versions of the policy.

Blair

-----Original Message-----

From: Augustus Archampong
Sent: Monday, February 28, 2011 11:20 AM
To: Blair Reilly
Cc: Ross Nairne; Colin Blair; Sheila Miller (AENV)
Subject: RE: Aggregate Policy

Hello Blair,

Attached are: (1) the Aggregate Policy and (2) the background document; I have also attached (3) a copy of Ernie Hui-Rick Brown memo. Let me know if you have further questions or comments.

Archie.

Memorandum

From: Ernie Hui
Assistant Deputy Minister
Policy

Our File Reference: AR 42742

Your File Reference:

To: Rick Brown
Assistant Deputy minister
Operations

Date: January 13, 2011

Subject: Surface Water Body Aggregate Policy

Following a request by MLA Diana McQueen and officials of Brazeau County, Environmental Assurance led the development of the above Policy.

A multidisciplinary team, consisting of Alberta Sustainable Resources Development and Alberta Environment staff, as well as staff of other federal and provincial agencies; reps of municipalities and private stakeholders was formed this April, to carry out the policy development. The regulatory authority of the policy is derived from the *Public Lands Act*, the *Water Act*, and the *Environmental Protection and Enhancement Act* which are administered by the two GoA departments. There is no need for the development of additional legislation.

The policy committee has completed its task which sets out the roles and responsibilities of the regulatory organizations (Sustainable Resources Development and Alberta Environment) and establishes guidelines on where the extraction of aggregate from water bodies may be permitted in the province. Since the policy is of operational level nature, it does not need legislative review and I intend to proceed with its implementation immediately. The department has been without clear guidelines on this subject for over a decade.

I would appreciate your communicating to staff that the attached policy document is effective immediately. Your staff may contact the Water Policy Branch on matters involving policy implementation plans.


Ernie Hui

c.c. Bob Barraclough, Director, Water Policy Branch, Policy.



Freedom To Create. Spirit To Achieve.

Background, Context, & Future Work
Surface Water Body Aggregate Policy
Document 1 of 2

Government of Alberta
November 2010

List of Acronyms

AAMDC	Alberta Association of Municipal Districts & Counties
AENV	Alberta Environment
ASGA	Alberta Sand and Gravel Association
ASRD	Alberta Sustainable Resource Development
DFO	Fisheries and Oceans Canada
EPEA	<i>Environmental Protection and Enhancement Act</i>
GoA	Government of Alberta
HADD	Harmful Alteration, Disruption, or Destruction
JTIWG	Joint Technical Issues Working Group
LOC	Licence of Occupation
LUF	Land-use Framework
PLA	<i>Public Lands Act</i>
SMC	Surface Materials Licence
SME	Surface Materials Exploration Permit
SML	Surface Materials Lease
WA	<i>Water Act</i>

A. Explanation of Problem & Drivers for Policy

Aggregate operations, which includes extraction and redistribution, within the active and non-active areas of surface water bodies has occurred in the province for decades; the apparent ease of access to the aggregate may have influenced this choice. Aggregate operations are an important contributor to economic activity in Alberta and there is an increasing demand from local governments and industry to extract aggregate resources from surface water bodies for commercial purposes. Occasionally there may be demand from local governments to redistribute aggregate within surface water bodies as a preventative or mitigative measure, or in emergency situations.

This demand is often countered by public concern about allowing aggregate operations in surface water bodies, which is why authorizations have not been issued for the past ten years. Although this approach protected the aquatic environment, the public was not given any guidance as to where they can access aggregate resources.

Aggregate operations within the active channel of surface water bodies is a concern as the associated activities have been shown to have significant adverse effects on aquatic species and habitat, water quality, the configuration of the bed, banks and shores of water bodies, and riparian terrestrial habitat. Physical changes to a surface water body as a result of aggregate operations have also been shown to have an adverse effect on adjacent lands and infrastructure, both upstream and downstream of the operation location. Depending on proximity, aggregate operations in areas outside the active channel could have an effect on fish and fish habitat. Operational procedures and best management practices are required to mitigate such possible impacts.

There is no formal provincial policy on aggregate operations within a surface water body. A clear and consistent policy to guide review of applications for regulatory authorizations will provide greater clarity for proponents of aggregate operations. The approach adopted by this policy will lead to broader environmental protection.

B. Current Regulatory State

1. Municipal

The *Municipal Government Act* (Municipal Affairs) authorizes municipal governments to create bylaws, which may affect aggregate operations within surface water bodies.

2. Provincial

Aggregate operations on public and private lands in Alberta are regulated under three provincial enactments: the *Water Act* (Alberta Environment), the *Public Lands Act* (Alberta Sustainable Resource Development), and the *Environmental Protection and Enhancement Act* (Alberta Environment). These have separate and distinct regulatory processes.

3. Federal

Aggregate operations situated in the active and/or non-active areas of surface water bodies must also meet federal regulatory requirements under the *Fisheries Act*, the *Navigable Waters Protection Act*, and possibly the *Canadian Environmental Assessment Act* or the *Species at Risk Act*.

Any work or undertaking that causes the harmful alteration, disruption or destruction (HADD) of fish habitat is prohibited unless authorized under the federal *Fisheries Act*. DFO will review proposed works or undertakings using the Risk Management Framework as outlined in the *Practitioners Guide to the Risk Management Framework for DFO Habitat Management Staff*. DFO may choose NOT to issue an authorization where:

- the magnitude and duration of the HADD is unacceptable;
- the fish habitat affected is critical to the maintenance of fish populations;
- the works or undertakings would result in the deposit of a deleterious substance into fish bearing habitat;
- no acceptable compensation (to replace affected fish habitat) can be achieved.

If an authorization is required, the potential environmental effects of the project must also be assessed pursuant to the *Canadian Environmental Assessment Act*. If it is determined that 'no significant adverse environmental effects' will occur, a *Fisheries Act* authorization may be considered.

This approach is consistent with the objectives of ASRD, under the *Public Lands Act*, and AENV, under the *Water Act* and the *Environmental Protection and Enhancement Act*, who are required to consider the protection of the aquatic environment when issuing authorizations.

In the past 10 years, DFO has declined issuing authorizations in Alberta under the *Fisheries Act* (Canada) for extraction within the active channel of fish-bearing surface water bodies. AENV and ASRD similarly have not issued any provincial approvals.

4. Other Jurisdictions

Aggregate extraction from the active area of surface water bodies "has been prohibited in the United Kingdom, Germany, France, The Netherlands, and Switzerland and is being reduced in rivers in Italy, Portugal, and New Zealand".

[Source: Kondolf, G.M (1997) Hungry water: effects of dams and gravel mining on river channels. *Environ. Manage.* 21:533-551. IN Meador and Layher (1998) Instream sand and gravel mining: Environmental issues and regulatory process in the United States. *Fisheries Habitat.* 23(11): 6-13.]

C. Relationship to GoA Strategic Policy

1. Land-use Framework (LUF)

The Surface Water Body Aggregate Policy:

- Provides guidance to LUF regional plans as to where aggregate operations within surface water bodies may be acceptable.
- Enables 'place-based' responses to regulatory applications for aggregate operations, but provides a provincially consistent policy to determine whether or not the operation would be acceptable in the provincial policy and regulatory contexts.
- Articulates a consistent policy so that the cumulative effects of aggregate operations are considered and managed.
- Is applicable to public and private lands.

Relevant LUF Strategies:

- Strategy 1: Develop seven regional land-use plans based on seven new land-use regions.
- Strategy 3: Cumulative effects management will be used at the regional level to manage the impacts of development on land, water, and air.
- Strategy 4: Develop a strategy for conservation and stewardship on private and public lands

2. Water for Life Strategy

The Surface Water Body Aggregate Policy:

- Supports the Healthy Aquatic Ecosystems outcome of the Water for Life Strategy.

Relevant Water for Life Action Plan items:

- Action 2.1: Enforce protection of known critical aquatic ecosystems using existing legislation
- Action 2.6: Implement aquatic restoration plan and conserve key aquatic ecosystems through regional land-use approaches and identified partnerships

D. Work to Date

To date, no provincial policy for aggregate operations within surface water bodies has been developed, although several attempts have been made in the past. Recently, the Joint Technical Issues Working Group (JTIWG) has provided recommendations (March 31 2010) pertaining to aggregate extraction in the active area of surface water bodies. Their role is to facilitate consistent federal and provincial approaches to regulatory processes. The consensus of the JTIWG is to continue the moratorium on applications for commercial aggregate extraction projects within the active channel.

E. Current Work

Alberta's Minister of Environment requested that a GoA policy be developed to transparently and consistently regulate at the provincial level aggregate operations within surface water bodies. AENV led the development of the GoA's position in partnership with ASRD. Terms of Reference were drafted and the parties indicated below were included in the development of the attached Surface Water Body Aggregate Policy (Document 2 of 2).

Sector	Target audiences	Outcome of consultation	Methods of consultation
AENV	Water Policy Branch; Regional Staff; River Forecasting; First Nations advisors; Legal Services	Surface Water body Aggregate Policy	Committee Representation; Meetings; Email requests for comments
ASRD	Fish & Wildlife Division; Lands Division	Surface Water body Aggregate Policy	Committee Representation; Meetings; Email requests for comments
Other GoA Ministries	Alberta Transportation	Awareness of policy changes & understanding of required process.	Committee Representation
Federal Regulatory Agencies	DFO	Ensure consistency with DFO legislation. Awareness of policy changes & understanding of required process.	Committee Representation
Municipal and Local Governments	AAMDC	Awareness of policy changes & understanding of required process.	Committee Representation
Other Proponents	ASGA	Awareness of policy changes & understanding of required process.	Committee Representation

F. Future Work Requirements

- Develop pre-assessment requirements, risk assessment triggers, and best management practices. Consider content and format requirements.
- Develop a detailed process flow chart for proponents.
- Engage and educate stakeholders on the new Surface Water body Aggregate Policy, including internal staff, proponents, partners, and the public.
- Develop a Monitoring and Evaluation Plan for the Surface Water body Aggregate Policy.

Completion of these requirements will require substantial time and resources. Therefore it is recommended that a detailed implementation plan be developed as an inter-departmental (AENV & ASRD) priority so that resources can be allocated and committed to the completion of this project.



Surface Water Body Aggregate Policy

Document 2 of 2

May 23, 2012

I. Endorsement

This Policy is a consensus-based document supported by the policy drafting committee that concluded its work in November 2010. As the policy guidelines were crafted within sanction of the existing legislations there is no need to amend any legislation – *Water Act*, *Environmental Protection and Enhancement Act*, and the *Public Lands Act*, etc.

This policy is effective immediately. Amendments may be made at any time by mutual consent of the participating organizations; policy guidelines will be developed.

II. Glossary

For the purposes of this policy, the following definitions have been adopted:

Active channel: An 'active channel', as defined in the *Water Act Code of Practice for Watercourse Crossings*, excluding wetlands.

Aggregate: Any sand, gravel, clay or marl that is excavated from a pit, whether in a processed or unprocessed form, but does not include *reject*.

Emergency situation: Any situation that may jeopardize human life or critical infrastructure and where aggregate removal is incidental to the activities required to alleviate that threat.

Extraction: Includes the stripping and stockpiling of soil, overburden, and aggregate materials and the transport of said materials within the site.

Non-active area of a surface water body: Any area of a surface water body that is not included in the active channel.

Operations: Include extraction and redistribution.

Qualified professional: Under this policy, the Ministry of Environment and Sustainable Resource Development (ESRD) recognize the following six professional regulatory organizations (PROs) whose members may have the scope of practice to conduct complete or partial risk assessments for proposed aggregate operations:

- Alberta Institute of Agrologists (AIA)
- Alberta Society of Professional Biologists (ASPB)
- Association of the Chemical Profession of Alberta (ACPA)
- Association of Professional Engineers and Geologists and Geophysicists of Alberta (APEGGA)
- College of Alberta Professional Foresters (CAPF)
- College of Alberta Professional Forest Technologists (CAPFT)

Redistribution: The movement of aggregate from one site to another for preventative, mitigative, or emergency purposes.

Reject: Aggregate that is expected to be unsuitable for use as a product, or for blending with other aggregate to form a product, and is therefore expected to be used for reclamation of the pit.

Surface Water Body: A Water Body, as defined in the *Water Act*, excluding wetlands.

Water Body (*Water Act*): Any location where water flows or is present, whether or not the flow or the presence of water is continuous, intermittent or occurs only during a flood; this includes but is not limited to wetlands and aquifers, but does not include (except for clause (nn) and section 99) a "water body" that is part of an irrigation works if the irrigation works is subject to a license, and the irrigation works is owned by the licensee, unless the regulations specify that the location is included in the definition of water body.

III. Surface Water Body Aggregate Extraction Policy

A. Purpose

Articulate Government of Alberta (GoA) policy to support the provincial regulatory decision-making processes for proposed **aggregate** operations, including **extraction** and **redistribution**, in **active channels** and **non-active** areas of all surface **water bodies**.

B. Authority

This policy gives guidance to reviewing applications for authorizations to initiate aggregate operations under the *Public Lands Act*, the *Water Act*, and the *Environmental Protection and Enhancement Act*.

Although this policy is for aggregate operations within surface water bodies, excluding wetlands, impacts on aquifers and wetlands should be considered in a pre-assessment and/or formal risk assessment when applicable.

- In case of contradiction between this policy and any Act, Regulation, or Code, the Act, Regulation, or Code prevails.
- For aggregate extraction from aquifers, refer to Groundwater Evaluation Guidelines.
- For aggregate extraction from wetlands, refer to the Alberta Wetlands Policy.

This policy is only applicable to aggregate operations within surface water bodies.

C. Assumptions and Principles

1. Aggregate extraction in any active channel of a surface water body will have adverse environmental impacts.
2. Aggregate extraction in a non-active area of a surface water body may have adverse environmental impacts if not carried out responsibly.
3. This policy promotes a risk-based approach to aggregate operations in the non-active area and aggregate redistribution in the active channel of a surface water body.
4. Applications for authorizations to initiate aggregate operations within surface water bodies will be processed according to the guidance outlined in this policy, which considers the regulatory mandates of ESRD.

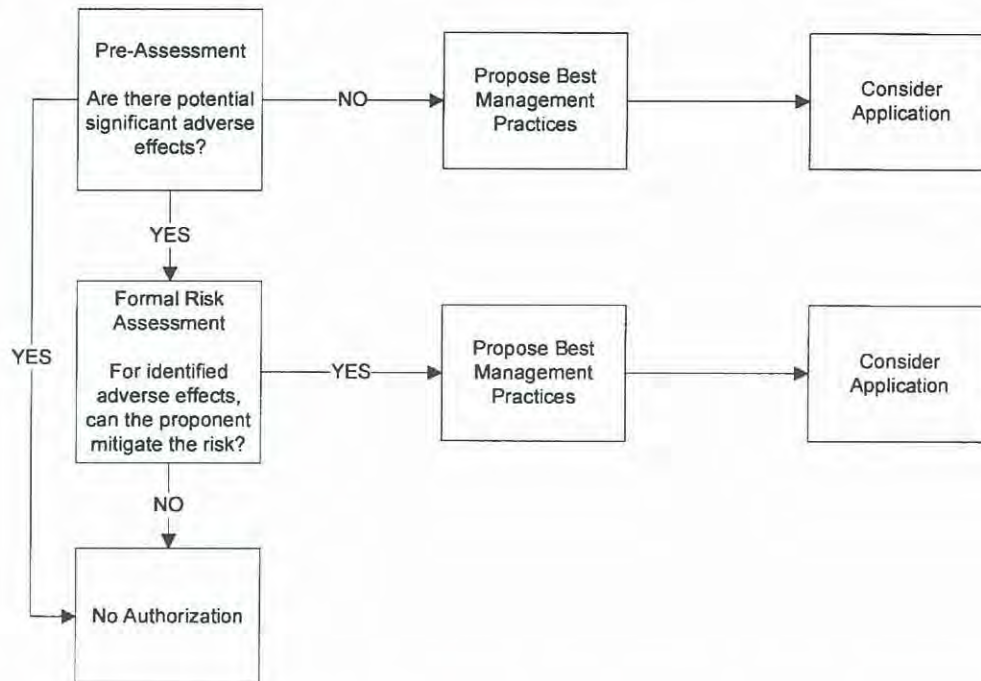
D. Vision and Outcomes

Surface water body aggregate operations are carried out responsibly to ensure the maintenance and protection of the natural morphology of water body systems, including aquifers and wetlands, the quality of water they contain, and the maintenance of aquatic and terrestrial habitat.

- Aggregate extraction from and relocation within surface water bodies is permitted to occur only in areas where it will not adversely impact the environment or aquatic ecosystems.
- The GoA has a common and consistent approach to applications for authorizations for aggregate operations within a surface water body.
- The roles and responsibilities of regulators are clearly defined.

E. Policy Guidelines for Aggregate Operations within Surface Water Bodies

1. Decision making Framework



Regulatory instruments commonly triggered by aggregate operations in surface water bodies are described in Section F and could be used as guidance when determining potential significant adverse effects. The list in Section F is not exhaustive; the responsibility to thoroughly assess each site remains with the proponent. Proponents of all aggregate extraction operations must ensure that all municipal bylaws, provincial and federal regulations, statutes, and policies will be met.

2. New Aggregate Operations

2.1 Active Channel of a Surface Water Body

New aggregate operations proposed within the active channel of a surface water body will not be authorized by ESRD, with the possible limited exception of preventative and mitigative measures.

2.2 Non-active Area of a Surface Water Body

New aggregate operations proposed within the non-active area of a surface water body will only be considered for authorizations when the proponent identifies and mitigates possible significant adverse effects as per the process in Section 1, Decision-Making Framework.

3. Existing Approved Aggregate Operations

Existing approved aggregate operations will be allowed to continue for the remaining term of their *Public Lands Act*, *Environmental Protection and Enhancement Act*, or *Water Act* authorizations, subject to the requirements under the *Fisheries Act*. After this time, a renewal of an existing authorization will include a plan, where necessary, to bring the existing operation into compliance with the requirements outlined under this policy for new aggregate operations. This may include, but does not necessarily include, a risk assessment to address potential significant adverse effects.

4. Undeveloped Operations Aggregates

Undeveloped aggregate operations that have a *Public Lands Act* authorization but no *Environmental Protection and Enhancement Act* or *Water Act* authorizations as of the effective date of this policy will be considered new aggregate operations and are subject to this Policy as if they are "New Aggregate Operations". A risk assessment may be required to address potential significant adverse effects.

5. Emergency Situations

In rare circumstances, measures to protect human life or critical infrastructure in emergency situations may require aggregate redistribution within surface water bodies as part of the emergency response. Aggregate extraction will not be permitted. The various regulatory authorities have appropriate regulations and procedures in place to address emergencies; the regulators should be contacted immediately. The proposed emergency work will be considered on a case-by-case basis.

6. Preventative & Mitigative Measures

Occasionally, municipalities and other agencies responsible for critical infrastructure may need to conduct activities to prevent or mitigate damage to critical infrastructure and avoid future emergency situations. In these circumstances, relocation of aggregate materials within the active channel may be considered when the procedure in Section 1, Decision-Making Framework, is followed. The proponent will be required to assess the effects that the proposed work will have on bank and channel stability, including upstream and downstream of the proposed operations.

7. Best Management Practices (BMPs)

Where pre-assessment or formal risk assessment determines there will be no significant adverse effects, or that the effects can be adequately mitigated, BMPs must be implemented. BMPs are available in the following documents; all documents are as amended from time to time:

- Guide to the Code of Practice for Pits (ESRD 2004)
- Environmental Protection Guidelines for Pits (ESRD 1996, C&R/IL/96-5)
- Guidelines for Acquiring Surface Material Dispositions on Public Land (ESRD 2008)
- Best Management Practices User Manual for Aggregate Operators on Public Land (ESRD 2010)

8. Formal Risk Assessments

Formal risk assessments may be required when significant adverse effects are identified in the pre-assessment. When triggered, the formal risk assessment should include the strategies that will be employed to mitigate or compensate for those impacts, particularly for when existing or proposed BMPs are determined to be inadequate. The formal risk assessment must be completed by, or under the supervision of, a **qualified professional**.

The risk assessment may consider, but is not limited to, the following:

- Fish and wildlife, including aquatic species, terrestrial species, and species at risk
- Land, including vegetation and soils
- Hydrogeology and hydrology, including flood risk and base flow
- River engineering, including channel morphology and bank stability
- Water quality and impact on biota
- Wetlands
- Water Act and EPEA requirements and factors the Director must consider when making a decision

F. Guidance on Common Regulatory Instruments

1. Applicable ESRD Regulations and Guidelines

The applicability of legislation is dependent upon the location of the desired aggregate and, particularly, whether it is associated with public or private lands and/or is near a water body or may influence a water body, including aquifers and wetlands. The primary legislative considerations for surface water body aggregate operations are listed below.

1.1 Public Lands Act (PLA)

The *PLA* pertains to the ownership and management of public land, including the beds and shores of watercourses and water bodies. The *PLA* also provides for the allocation of aggregate, royalties, access, and enforcement.

Regulations include:

- Disposition & Fees Regulation

Guidelines include:

- Guidelines for Acquiring Surface Material Dispositions on Public Land

Possible Operator Requirements:

- Surface materials exploration (SME) permit
- Surface materials lease (SML), licence (SMC), reservation, or public pit licence
- Licence of Occupation (LOC)
- Conservation and Reclamation Business Plan

1.2 Environmental Protection and Enhancement Act (EPEA)

The *EPEA* pertains to environmental assessment, approvals, appeals, air and water emissions, conservation and reclamation, and enhancement. This legislation has application on all lands, private or public or water-related.

Regulations include:

- Activities Designation Regulation
- Approvals and Registrations Procedure Regulation
- Conservation and Reclamation Regulation, including Code of Practice for Pits

Guidelines include:

- Environmental Protection Guidelines for Pits (Conservation & Reclamation Information letter 96-95)

Possible Operator Requirements:

- Registration - for private land pits with potential surface area disturbances exceeding five hectares (Class 1 Pits)
- Reclamation Certificate - includes Conservation & Reclamation Plan

1.3 Water Act (WA)

The *WA* pertains to management, use, allocation and environmental protection in conjunction with activities that may influence water. Hence, washing operations, diversions, activities in floodplains and creation of water bodies are activities associated with aggregate operations that may require an authorization.

Regulations include:

- Water (Ministerial) Regulation

Possible Operator Requirements:

- Licence - for diversion of water
- Approval - for the establishment/operation of works in a water body

1.4 Other Applicable Guidelines

Aggregate operations must also comply with the following:

- Fish & Wildlife Objectives
- First Nations Consultation Policy
- Alberta First Nations Consultation

1.5 Required Applications

The list below includes provincial regulatory authorizations. These applications are always required for initiation of the provincial regulatory review process. The respective application forms can be found at www.esrd.alberta.ca.

- *Public Lands Act* disposition
- *Water Act* approval and/or licence
- EPEA Code of Practice for Pits registration

Each Ministry will share applications with other agencies as required, within the constraints of the *Freedom of Information and Protection of Privacy Act (FOIP)*.

2. Potential Regulatory Requirements

Depending on the location and/or scope of the operation, proponents may also need to consider other regulatory requirements, which may include but are not necessarily limited to the following:

Legislation	Organization	Function
<i>Canadian Environmental Assessment Act</i>	Multi-agency (Federal)	Assessment of specified developments that may affect the environment
<i>Fisheries Act</i>	Environment Canada	Regulation of the release of deleterious substances (section 36(3)) for the purposes of protecting fish and fish habitat
	Fisheries and Oceans Canada	Protection of fish and fish habitat
<i>Migratory Birds Convention Act</i>	Environment Canada	Protection of migratory birds
<i>Species at Risk Act</i>	Environment Canada	Protection of terrestrial species designated as 'at risk'
	Fisheries and Oceans Canada	Protection of aquatic species designated as 'at risk'
<i>Navigable Waters Protection Act</i>	Transport Canada	Security of Canada's waters for navigation purposes
<i>Alberta Land Stewardship Act</i>	Environment and Sustainable Resource Development	Provides for the development of regional land use plans
<i>Alberta Wildlife Act</i>	Environment and Sustainable Resource Development	Protection of wildlife
<i>Forest and Prairie Protection Act</i>	Environment and Sustainable Resource Development	Protection and salvage of timber resources on public land
<i>Historical Resources Act</i>	Alberta Culture	Preservation of historic, archaeological and paleontological resources and sites
<i>Emergency Management Act</i>	Alberta Municipal Affairs	Provides for the disbursement of disaster recovery assistance if the event meets the criteria outlined in Regulation 51/94
<i>Municipal Government Act</i>	Local Municipalities	Provides local municipalities with authority to regulate land use through land use plans, bylaws and development permits

From: Augustus Archampong
Sent: Thursday, December 22, 2011 2:50 PM
To: Dave Park
Cc: Larry Kuchmak; Ryan Puhlmann; Bruce Blue; John Taggart; Gerry Haekel; 'Tom.Olson@dfo-mpo.gc.ca'; Neil Hollands
Subject: RE: Committee Terms of Reference.doc

Follow Up Flag: Follow up
Flag Status: Flagged

Hello David,

Here is some information from AEW files that might throw some light on the issues raised in your correspondence:

* On Jan 13, 2010 Ernie Hui/ Glenn Selland, and Ernie Hui Daryl Empson memos and attached finalized copies of the Policy documents were sent to SRD. Ernie's memo and the Policy document should address the concerns in your email. Similar memos/letter were also sent to executives of participating parties including Transportation and DFO committee members. At this time, it is the position of AEW that the Policy document, as-is, will be used as the policy is of operational level nature and there is no need for further legislative review.

* The struggles you experienced with regard to communication is not intended as the records will show that correspondence from AEW to SRD about this Policy continued at some level. We have also had many opportunities to meet face to face and I do not recollect any issues expressed.

Please use outlook to schedule a meeting between us so I can share my paper files with you. If you prefer that I schedule the meeting instead, please let me know.

I welcome your comment about clarification of the of the Policy's status . Let's do it.

Cheers, Archie.

From: David Park
Sent: Thursday, December 22, 2011 11:29 AM
To: Augustus Archampong
Cc: Larry Kuchmak; Ryan Puhlmann; Bruce Blue; John Taggart; Gerry Haekel; 'Tom.Olson@dfo-mpo.gc.ca'
Subject: RE: Committee Terms of Reference.doc

Archie,
OK, I've found the attached documents in my files. Are they the policy documents you refer to, and of the most current vintage? Has the policy yet received Ministerial signatures? I don't have any correspondence indicating it has. I can't find the policy in the AEW online policy compendium either. If not signed, isn't that a crucial step? A previous package included a draft consultation & implementation plan. What has become of that?

A large part of my struggles in sorting this business out is due to it being a year since I last received email from you regarding this file. It appears to have lain dormant across that span of time and I have no indication of executive and ministerial level endorsement, in support of its implementation.

I welcome clarification about the status of this policy. I want to see this move forward, but am concerned about what appears to be process gaps.

<< File: Aggregate Extraction Policy_v9.doc >> << File: Background Information_v9
(2).doc >>

Attachments #1&2 are same as pages 456-471.

Regards,

David Park, M. Sc.
Provincial Aquatic Habitat Specialist / Fisheries Biologist
Alberta Sustainable Resource Development
Fisheries Management
Edmonton

phone: 1.780.427-8347
fax: 1.780.422-9559

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From: Augustus Archampong
Sent: Thursday, December 22, 2011 9:08 AM
To: David Park
Cc: Larry Kuchmak; Ryan Puhlmann; Gerry Haekel; Bruce Blue; 'Brock Helm'; 'Tom.Olson@dfo-mpo.gc.ca'; John Taggart
Subject: RE: Committee Terms of Reference.doc

Hello David,

The policy guideline is an integral part of the Surface Water Body Aggregate Policy. The proposed work is continuation of the policy development work done, so far.

AEW believes that you already have executive level endorsement, same as the initial endorsement for the work previously done. Honorable Minister of Alberta Environment & Water, Diana McQueen wants this task to be completed shortly.

From: David Park
Sent: Wednesday, December 21, 2011 11:47 AM
To: Augustus Archampong
Cc: Larry Kuchmak; Ryan Puhlmann; Gerry Haekel; Bruce Blue; 'Brock Helm'; 'Tom.Olson@dfo-mpo.gc.ca'
Subject: RE: Committee Terms of Reference.doc

Hi Archie,
Has there been endorsement yet at the Executive level of the Ministries involved?
Memory is fuzzy and I can't find correspondence to indicate the committee is formed...
Dave

Regards,

David Park, M. Sc.
Provincial Aquatic Habitat Specialist / Fisheries Biologist
Alberta Sustainable Resource Development
Fisheries Management
Edmonton

phone: 1.780.427-8347
fax: 1.780.422-9559

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From: Augustus Archampong
Sent: Wednesday, December 21, 2011 11:21 AM
To: Larry Kuchmak; Ryan Puhmann; David Park; Gerry Haekel; Bruce Blue; 'Brock Helm';
'Tom.Olson@dfo-mpo.gc.ca'
Subject: Committee Terms of Reference.doc **Duplicate of Committee Terms of Reference dated Feb. 21/09, removed as non-responsive.**

Attached is an initial straw-dog for this project. I suggest that you revisit sections E & F of the Surface Water Body Aggregate Policy, Document 2 of 2 before commenting on this straw-dog. I would appreciate your input (please track changes) on the document, and forward to me on or before Jan 13, 2012.

Gerry, I already have your input following our previous communication - thanks, but you are welcome to add any additional input.

David please forward a copy of the document to the SRD wildlife rep.

Cheers, Archie.