

File: Hullcar Situation Review

25 September 2017

To: Doug Hill, A/Executive Director, Ministry of Environment and Climate Change (ENV)

From: Heike Lettrari, Senior Policy Advisor, Ministry of Environment and Climate Change Strategy

**Re: Hullcar Situation Summary**

### **Background and Purpose**

The Minister of Environment and Climate Change Strategy George Heyman announced a review of the Hullcar Aquifer (The Review) on August 2, 2017, with the goal of ensuring agricultural practices are consistent with the provision and protection of clean, safe drinking water. The Review, led by an independent review team, POLIS, has examined decisions and actions taken to-date with respect to addressing the nitrate pollution in the Hullcar Aquifer.

As part of the Review, the Factual Report, also known as the “Hullcar Situation Summary” was undertaken, and comprises several components, including the Hullcar Chronology, the Hullcar Roles and Responsibilities, and the Review of the Factual Record, summarized in this memo. The Chronology builds a timeline of major actions and decisions taken by government to respond to the issue when high rates of nitrates were identified in January of 2014. The Roles and Responsibilities document the 17 primary agencies and organizations with direct and indirect governance authorities in addressing the Hullcar Situation. And the Review of the Factual Record examined internal government files to pull major themes and observations from the correspondence and compliance and enforcement files. This memo stitches together this three-part document package and summarizes the important findings of the Review of the Factual Record. A fourth companion document (annotated document guide) to the Review of the Factual Record assembles the key documents and information that informed government actions. Many of these documents are already shared publically on the [Hullcar Aquifer Information site](#).

Note: This memo assumes familiarity with the different parties and agencies involved; please refer to the Roles and Responsibilities for further clarification, if necessary. Acronyms given in Appendix 1 below.

### **Methodology**

**The Hullcar Chronology:** Expanded on the chronology of events (“Key Inter-Ministry Action”) on the [Hullcar Aquifer Information site](#) through an examination of internal government documents and files, supplemented by follow-ups with key government staff who have worked on this file since 2014.

**The Roles and Responsibilities:** Provincial government agencies roles and responsibilities were defined in consultation with key government staff who worked on the Hullcar file since 2014. Agencies and organizations outside of the provincial government were researched through information available to the public (which is why several may appear to be somewhat general in description). For each agency and organization, their legal authorities, applicable legislation, and key staff and examples of their roles in responding to the Hullcar Situation were identified where possible.

**The Review of the Factual Record:** Examined key internal government files to gather themes and observations on the actions by government, direct correspondence and engagement with agricultural operators and other agencies involved, and compliance and enforcement actions taken to date.

## **Discussion**

At a very high level, this discussion presents key themes and observations from examining the internal government files in two main themes: correspondence and compliance and enforcement. All documents were examined between August 15 and September 25, 2017.

**Following the Correspondence:** Hundreds of emails have been exchanged between government staff from the major agencies involved (ENV, AGRI, FLNR, IHA), the Steele Springs Water District (SSWD), and directly with agricultural operators and the qualified professionals they employed (agrologists, certified crop advisors). Exchanges with SSWD frequently addressed data sharing regarding water sample results, the logistics of undertaking the sampling, and lab analysis. Exchanges between government agencies frequently dealt directly with coordination of actions and activities as per the Inter-Agency Working Group actions, as well as responses to various inquiries or issues that arose, such as undertaking well head inspections and answering information requests.

Exchanges with Splatsin concerned the appropriate government to government relationship building, coordinating in-person meetings and support for the First Nation, including much exchange over the financial support for water treatment that was announced early in 2017. A Letter of Intent and Memorandum of Understanding were later drafted, and continued relationship-building and finalization of the MOU is ongoing.

Early correspondence with the Save the Hullcar Aquifer Team (SHAT) primarily conveyed annoyance and frustration about the perceived lack of action on the part of government, and that communication from government did not seem to be very forthright. However, emails indicate the relationship improved over time, with agreements to in-person meetings and more information sharing. SHAT members take seriously their role as an active concerned citizen group, and maintained frequent correspondence with government staff on the agricultural operator activities in the Hullcar Valley, forwarding those observations to government staff, asking for information and follow-up in return.

Fewer exchanges took place between government staff the First Nations Health Authority and Indigenous and Northern Affairs Canada, but revolved primarily around support for the Splatsin.

**Compliance and Enforcement:** Government showed a reluctance to identify a single cause of the problem without the evidence to support it, and pursued finding the evidence that supported taking appropriate action. That included coordinating the various ministries with jurisdiction in this situation, as well as issuing orders to numerous agricultural operators (instead of just one operator). Under the *Environmental Management Act*, an order is a written, legal instrument used by a person with delegated authority (e.g. director) to manage a risk to the environment, human health or public safety. Issuing the orders meant that the statutory decision-maker was satisfied on reasonable grounds that an activity or operation is likely to release a substance that will cause, or is causing pollution (e.g. Nitrates).

The orders had several requirements for each agricultural operator to adhere to. Correspondence with the operators showed that several of them were surprised and questioned government's use of the orders as compliance tools. Several operators pursued appeals for their orders with the Environmental Appeal Board (several were dismissed), with one appeal of a pollution abatement order successful (Curtis Farm) on the grounds that there was insufficient evidence that that operator was causing pollution. Some operators were faster than others to address the requirements of the order, with one agricultural operator delayed in following the requirements of the orders to date. Several expressed ire that such a strong enforcement tool was used to address their day-to-day business: many of the order requirements had monetary implications and stipulated addressing infrastructure, planning and documentation, and manure storage facility upgrades (temporary or permanent). Many operators were also keen to know as soon as possible that the orders had been satisfied and were no longer in effect, and wanted compliance staff to tell them as soon as possible. Unrelated to the orders, two Administrative Monetary Penalties were issued to one operator in 2017 for an incident in which a storage pond overflowed and was followed by manure application to frozen ground.

A detailed account of exchanges regarding compliance and enforcement and the orders can be found in Table 1 below in Appendix 2.

### **Next Steps**

The chronology, roles and responsibilities table, and a tabulation of key documents have been provided to POLIS for review. This information will be used by POLIS to inform the recommendations that they develop, and will also provide a picture of the evolution of the Hullcar situation and how it was managed over the past three years.

**Sincerely,**

**Heike Lettrari**

**CC: Oliver Brandes, POLIS**

**Jesse Baltutis, POLIS**

**Appendix 1: Acronyms**

AGRI	Ministry of Agriculture
ARDCorp	BC Agricultural Research and Development Corporation
COS	Conservation Officer Service
ENV	Ministry of Environment and Climate Change Strategy
FIPPA	<i>Freedom of Information and Privacy Protection Act</i>
FLNR	Ministry of Forests, Lands, Natural Resource Operations and Rural Development
FNHA	First Nations Health Authority
IHA	Interior Health Authority
IMWG	Inter-Ministry Working Group
INAC	Indigenous and Northern Affairs Canada
IRR	Ministry of Indigenous Relations and Reconciliation
MOU	Memorandum of Understanding
OIPC	Office of the Information and Privacy Commissioner
SDM	Statutory Decision-Maker (provincial government)
SHAT	Save the Hullcar Aquifer Team
SSDW	Steele Springs Drinking Water
SSWD	Steele Springs Water District

**Appendix 2: Hullcar Aquifer Review of the Factual Record Table: Government Compliance and Enforcement Documentation, Decisions and Actions**

This table provides a detailed supporting document guide to overview the factual record on behalf of provincial government agencies involved in responding to the Hullcar Aquifer. An overarching memo is forthcoming. The documents noted here include emails, memos, technical reports, sample results, correspondence, agricultural operators’ action plans, and compliance and enforcement documents such as pollution abatement and pollution prevention orders.

**Table 1: Compliance and Enforcement Documentation**

File	Dates	Documents	Description
<b>Orders information affecting D. Regehr.</b>			
<u>01 Correspondence</u>	2016-03-01 to 2017-08-16	Emails	28 emails between DRegehr, Certified Crop Advisor, Environmental Protection Officer (ENV), and consulting Agrologist. Re: lab results, inspection results, post-harvest nitrate study, the information order and its requirements, general notes from discussions, follow-ups on inquiries, nutrient assessments and the nutrient management plan, and fertilizer applications.
	2017-06-21 and 2017-06-23	PDFs	Two scanned documents of several pages of notes of phone conversation between DRegehr and an Environmental Protection Officer (ENV) re: DRegehr comments about costs of filling requirements of order, nutrient application methods, and other comments about perceptions of government.
<u>04 Orders: 2011-2012 sample info 2014</u>	2011, 2012	Sample Information	4 PDFs of soil test sample results from 2011; 1 PDF of soil test results from 2012. 2 Word Docs of soil test results from 2012, all prepared for Certified Crop Advisor.
	2014-03-27	Email	Certified Crop Advisor to Environmental Protection Officer (ENV) re: results of 2011 and 2012 soil analysis on DRegehr field and future sampling plan.
<u>2015</u>	2015-04-22 to 2015-04-27	Emails	4 emails. 2: Certified Crop Advisor emailing Environmental Protection Officer (ENV) re: the completed 2015 manure management plan for DRegehr. 2: internal government emails (ENV to AGRI) to information share, and set up a meeting to discuss.
<u>2016</u>	2015-02-25 to 2016-04-01	Emails + Word documents	<ul style="list-style-type: none"> <li>2 emails between Certified Crop Advisor emailing Environmental Protection Officer (ENV) re: submission of drafts and final manure management plan for 2016, on behalf of DRegehr. Results of soil samples</li> </ul>

File	Dates	Documents	Description	
2017		and PDFs	<p>included.</p> <ul style="list-style-type: none"> <li>• 2 emails between Certified Crop Advisor emailing Environmental Protection Officer re: fall 2015 soil sample results.</li> <li>• 2 emails between Certified Crop Advisor and Environmental Protection Officer re: spring 2016 soil testing.</li> <li>• 1 email between Certified Crop Advisor and Environmental Protection Officer updating DRegehr nutrient management plan for next 5 years.</li> <li>• 1 email between Certified Crop Advisor and Environmental Protection Officer stating no manure will be put on DRegehr field this year, but notification that fertilizer will be added.</li> <li>• 2 Word documents of updated and final nutrient management plans.</li> <li>• 2 PDFs of Spring 2016 soil test results and fertilizer information from Certified Crop Advisor.</li> </ul>	
	2017-02-28	Emails	3 emails from consulting agrologist to Environmental Protection Officer (ENV) re: annual summaries of cropping, nutrient management and monitoring data for DRegehr, following the requirements of his Information Order. Lab data and pdf files sent.	
	<u>07a Rpts-Data</u>	2011, 2012; 201708-16	PDFs, Email, Word	<p>3 documents of soil test results for DRegehr.</p> <p>1 Email from certified agrologist (AGRI) to Environmental Protection Officer (NEV) re: DRegehr nutrient assessment for August 2017.</p> <p>1 document of a fertilizer report for DRegehr from Certified Crop Advisor (AGRI) from 2012.</p>
	<u>07b Rec Env</u>	2015-02-23 to 2016-07-26	Emails and PDFs	<p>3 emails with soil sample results directly from Lab to Environmental Protection Officer (ENV).</p> <p>8 PDFs of sample results of Regehr Barn directly from Lab, to ENV.</p>
	<u>09 Compliance</u>	2016-10-06	Emails	2 Emails from Environmental Protection Officer (ENV) to DRegehr regarding inspection results and compliance verification with the requirements of the Information Order.
	2017-02-14 to 2017-04-10	Emails and PDF	2 Emails regarding the inspection results against the information Order of DRegehr. One is an Environmental Protection Officer (ENV) emailing DRegehr to notify of inspection results; the second is internal to ENV staff, portioning out work to follow up on the inspection.	

File	Dates	Documents	Description
<u>10 Website</u>			1 PDF summarizing the results of the inspection.
	2017-07-14	Letter	Senior Environmental Protection Officer (ENV) letter to DRegehr informing of process for the conclusion of the order.
	2011-12 to 2016b	PDFs	Documents of soil test results to be posted to the Hullcar Information Site.
<b>Orders Information re: Friesen</b>			
<u>01 Correspondence</u>	2015-10 to 2017-07-24	Emails, PDFs, Word	16 emails re: inquiries and clarification of the Friesen pollution abatement order requirements between Regional Operations Branch Executive Director (ENV) and Environmental Protection Officers (ENV) and WFriesen. Friesen asked for an extension of the PAO on their poultry farm and appealed to the Environmental Appeal Board three times. The Word document from 2016-08-24 provides a file chronology of actions taken with this operator, ending with noting that Mr. Friesen was found to be non-compliant with the requirements of his order and the file was to be referred to the Conservation Officer Service for investigation.
	2016-05-05 to 2015 05 13	PDFs	7 PDFs of the pollution abatement order issued to WFriesen, and documentation of its delivery.
<u>06 Photos</u>	July 2016	Photos	Two site photos from the Friesen farm.
<u>08 Appeals</u>	2016-07-28 to 2016-08-24	Emails	18 emails providing information about the pollution abatement order, for the evaluation of the appeal by the Environmental Appeal Board chair and staff. Emails include correspondence between ENV staff and legal staff and EAB regarding notification of ENV staff and Friesen of the decision to close the appeal. Closing of the appeal occurred because the appeal was filed outside of the statutory limitation period and the Board was without jurisdiction to hear the appeal.
	2016-07-12 to 2017-07-19	Emails, PDFs	5 Email communicating about the Pollution Abatement Order for Friesen, between environmental protection officer (ENV) and Friesen, including the inspection report, the draft order, and a copy of the pollution abatement order. Also, setting up a meeting to discuss the results of the inspection.
<u>09 Compliance</u>			
<b>Orders Information re: Geisbrecht</b>			
<u>01 Correspondence</u>	2016-06-06 to 2016-07-20	Emails, PDFs, Word	27 emails between Giesbrecht and ENV staff, and internal government staff communication. Giesbrecht was looking for more information about a well with high nitrate in his immediate area; clarifying the conditions of the order, setting up

File	Dates	Documents	Description
<a href="#">04 Order</a>			meetings. Staff wanted to clarify the requests of the language used in the pollution abatement order, and received legal advice on the situation of the farm being sold, and how that affects the requirements of the order. Inspections results were also shared with Giesbrecht, and in the end, the conditions of the order were satisfied, and the order was concluded. 2 PDFs are letters acknowledging that the requirements of the order were satisfied. 2 PDFs are scanned notes from early meetings.
	2016-05-11 to 2016-07-22	Emails, Word, PDFs, photo	These files concern the pollution abatement order itself: its delivery, research done to establish the details of the company, the letter accompanying the pollution abatement order, emails to confirm that the requirements of the order have been satisfied, and the Farm Book, updated to reflect information from the pollution abatement order.
<a href="#">06 Photos</a>	July 2016	Photos	26 site photos of the Giesbrecht lands.
<a href="#">07a Rpts</a>	July 2016	PDFs	2 documents re: the Farm Book (needed re: the sale of the farm).
<a href="#">09 Compliance</a>	2016-07-22	Emails, PDFs	2 emails regarding the inspection record and the Farm Book, and two PDFs: one of the inspection record, the other of supporting photos taking during the inspection.
<b>Orders Information re: Haambuckers</b>			
<a href="#">01 Correspondence</a>	2016-05-09 to 2016-08-25	Emails and PDFs	This folder contains 6 emails and 4 pdfs recording exchanges with the Haambuckers re: their inspections, the pollution abatement order sent t to them, clarifying that the requirements of their order have been satisfied, and then the letter sent to them acknowledging that the order has concluded.
<a href="#">02 Ombuds Complaint</a>	2016-05-10 to 2017-03-01	Emails and PDFs	<ul style="list-style-type: none"> <li>One pdf is a scan of notes from an early phone conversation between ENV and Haambucker. In December of 2016, ENV staff was notified of an ombuds complaint filed by Haambucker, concerned that there was no prior notification of an issue before the pollution abatement order was issued.</li> <li>The emails document the Ministry's participation in responding to the complaint, with the second PDF documenting the closed investigation, without any findings of wrongdoing. The Ministry was found to be within its discretion to choose the appropriate tool address non-compliance, as per the internal compliance and enforcement policy.</li> </ul>
<a href="#">04 Order</a>	2016-05-13 to 2016-05-05	Emails, PDFs	<ul style="list-style-type: none"> <li>These documents are related directly to information and research compiled for the issuance of the order, including the completed pollution abatement</li> </ul>



File	Dates	Documents	Description
<a href="#">06 Photos</a> <a href="#">09 Compliance</a>			order package, the requirements of the order, the record of decisions that documents information used by the statutory decision-maker to issue the order, as it pertains to the Haambuckers. <ul style="list-style-type: none"> <li>• One email is from the consulting agrologist to submit the nutrient management plan on behalf of the Haambuckers.</li> <li>• The second email is in regards to the updated manure storage, and that it meets the requirements of the pollution abatement order.</li> </ul>
	2016-08-23	Photos	8 site photos that detail the manure storage area.
	2016 Feb	Photos and Word Photo Record	9 photos taken during this Feb 2016 inspection, organized then in a Word document used later in the inspection report.
	2016 July	Folder, email, PDFs	One folder contains photos taken on July 14 <sup>th</sup> , during an inspection. The email sent from the environmental protection officer (ENV) who undertook the inspection includes the two PDFs, which are the inspection report, documenting no non-compliance and the photoplate containing photos from the inspections.
<b>Orders Information re: Huxley</b>			
<a href="#">01 Correspondence</a>  <a href="#">04 Order</a>  <a href="#">06 Photos</a>  <a href="#">09 Compliance</a>	2015-05-09 to 2016-09-30	Emails, Word, PDFs	These documents are correspondence between various ENV staff and Huxley regarding his pollution abatement order. The Word documents are drafts of various PDF documents that were sent to Huxley, including the draft pollution abatement order, the order issued, details on how different requirements of the order will be met, and the letter to acknowledge that the requirements of the order have been met. <ul style="list-style-type: none"> <li>• One PDF is a factsheet from AGRI detailing information about the storage of solid agricultural waste shared with Huxley.</li> </ul>
	2016-05-06 to 2016-07-18	PDFs, Emails, Word	These documents pertain directly to the order package (and drafts) prepared and sent to Huxley, including amendments as per correspondence and requests by Huxley with regard to the manure storage facility he needed to build.
	2016 July 2016 Sept	Folder Folder	This folder contains 11 photos taken during an inspection on 13 July. This folder contains 12 photos taken during an inspection on 26 Sept.
	2016-08-08 to 2016-09-29	Emails, PDF	These documents are the draft pollution abatement order and inspections reports undertaken to verify the conditions of the order, which have been met.
<b>Orders Information re: Jansen</b>			

File	Dates	Documents	Description
<u>01</u> <u>Correspondence</u>	2016-04-08 to 201-08-09	Folders, Emails, PDFs, Word	<p>This folder contains an immense amount of correspondence associated with this file, including separate folders of correspondence from:</p> <ul style="list-style-type: none"> <li>• FLNR</li> <li>• IHA</li> <li>• AGRI</li> <li>• ENV internal</li> <li>• Township of Spallumcheen</li> </ul> <p>In the main folder, there are 67 emails detailing various information, such as verifying the certified crop advisor's education and suitability to help Jansen with accomplishing the requirements of their pollution abatement order, information sharing about the nutrient management plan, confirming the appropriate lab to process sample results, extension requests, well drilling information (for water sampling), action plan requirements, follow-ups re: the environmental impact assessment report, and approvals of the Jansen action plan.</p> <p>Much communication was involved between ENV staff and consultants (hydrogeologist, agrologist) working with operators to fulfill the requirements of the sampling, testing, nutrient management plan, and the pollution abatement order.</p>
FLNRO Correspondence	2014-07-08 to 2016-03-14	Emails	<p>15 emails between ENV compliance staff and FLNR staff primarily regarding pipe drilling that was undertaken by Jensen for the purpose of transporting liquid manure to a neighbouring farm.</p> <p>Correspondence with SSWD chair also included, re: notification of the drilling.</p>
IHA Correspondence	2014-03-19 to 2016-02-11	Emails, PDF	<p>The PDF is a copy of a letter sent to residents of the Hullcar Aquifer in July of 2014 regarding the high nitrates in the drinking water.</p> <p>The 20 emails document correspondence between SSWD and IHA, with ENV cc'd on those emails, as well as between IHA and ENV regarding nitrate information, sampling results, and other aquifer information.</p>
AGRI Correspondence	2014-08-07 to 2017-06-14	Emails, PDFs	<p>25 emails between AGRI and ENV regarding information sharing, onboarding staff new to the file, soil sampling and testing, clarifying information, staff changes, approvals, and internal information sharing about information that will go to operators.</p> <p>4 PDFs contain soil moisture and soil data for the Jansen Farm.</p>

File	Dates	Documents	Description
MJ Reiner Emails	2014-01-16 to 2014-07-07	Emails	MReiner was ENV staff with the Environmental Protection Division. These emails document his work coordinating onboarding of compliance staff (ENV) to the file, contact information between the certified crop advisor and ENV, understanding nutrient management/manure spreading information in different jurisdictions (Manitoba, Alberta), responding to SSWD.
ENV Internal	2014-07-08 to 2017-06-14	Emails, Word, photo, PDF	Documents and correspondence shared among ENV staff to respond to various inquiries and requests. Correspondence deals largely with finding the best regulatory options for response to the issue, including the area based management plan and pollution abatement and pollution prevention orders, as well as sharing waster sample results with SSWD.
Township of Spallumcheen	2014-11-25 to 2015-12-07	Emails	This correspondence includes emails sent to ENV compliance staff and to SSWD regarding activity on Jansen farms, such as the drilling of the pipe for manure effluent movement, and notification about approvals for manure spreading, and the formation of the Save the Hullcar Aquifer Team. Additionally, sampling results and data sharing with the Township from ENV staff is included, as well as this issue being raised at UBCM.
<u>04 Order</u>	2014 to 2017-09-06	Folders, PDFs, Word, Emails	<ul style="list-style-type: none"> <li>This folder contains subfolders for 2014 Nutrient Management Planning, 2014-2015 nutrient application decisions, 2015 nutrient management planning, and 2016 nutrient management planning. PDFs include documentation to confirm the receipt of the pollution abatement order and amendments, and research undertaken to verify the contact details of the farm.</li> <li>Emails document ENV receiving the draft and final nutrient management plan.</li> <li>The folder containing emails and documents about the 2014-2015 nutrient application approval requests includes three subfolders: approved letters, approved applications, and emails of approval letters sent to other parties such as the Township of Spallumcheen and SSWD. PDFs of the approval letters and communication with Jansen are included.</li> </ul>
<u>06 Maps and Photos</u>	July and Nov. 2016	Photos and Emails	This folder contains two emails from Nov 2016 documenting manure application. And 27 photos taken of the Jansen farm and infrastructure.
<u>07a Rpts-Data</u>	2016, 2017	PDFs,	<ul style="list-style-type: none"> <li>Several PDFs have been pulled out and included in this folder, including</li> </ul>

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07b Receiving Env and EIA Info		subfolders	<p>the 2006 Golder Associates “Groundwater Potential Evaluation for the Hullcar Area”, the 2016 Jansen Environmental Impact Assessment report, an internal memorandum reviewing the Hullcar aquifer and available data, a copy of the Jansen terms of reference and work plan in response to the pollution abatement order requirements, and the full Environmental Farm Plan reference guide.</p> <ul style="list-style-type: none"> <li>• One subfolder is dedicated to the Jansen’s Action Plan, in which 5 emails receive progressively updated information over June of 2017, until the final draft was sent July 30 2017.</li> <li>• The second subfolder contains a variety of information pertaining to the Jansen’s environmental impact assessment, and correspondence related to that between ENV, AGRI and FLNR staff, and between ENV and Jansen over 2016 and 2017. The final impact assessment report PDF is included from Feb 2017.</li> </ul>
		Subfolders, PDFs	<p>This folder contains three subfolders:</p> <ol style="list-style-type: none"> <li>1. Groundwater data for Feb 2016 review</li> <li>2. Post-harvest nitrate study</li> <li>3. Sampling</li> </ol> <p>And three PDFs, two with pre-2014 sampling soil data. And one Well Record of the three wells owned by DRegehr.</p> <p>In the subfolders:</p> <ul style="list-style-type: none"> <li>• In subfolder 1, data (Excel and PDFs) from various sampling points, and two subfolders containing IHA surface sample data and SSWD sampling that was shared with ENV.</li> </ul>

File	Dates	Documents	Description
<u>09 Compliance</u>	2016-05-03 to 2017-09-11	Word Docs, Emails, PDF	<ul style="list-style-type: none"> <li>The PDF is a copy of the Agricultural Waste Control Regulation.</li> <li>Two emails: 1 clarifying the role of the new Regional Stewardship Coordinator and his contract; the other requesting approvals for documents to be posted to the Hullcar website.</li> <li>Several documents (Word and Excel) containing information relevant for a communications plan by the IAWG, the status of orders issued to operators, a summary table of all the orders, an analysis of the differences in order requirements between a pollution abatement order and pollution prevention order for two operators.</li> </ul>
<b>Orders Information re: Grace-Mar</b>			
<u>01 Correspondence</u>	2016-06-28 to 2017-08-31	Emails, Word	<p>57 Emails between Grace-Mar and ENV, and ENV, AGRI, and consultants, regarding the action reports, the status of the manure storage lagoons on site, the requirements of the order, and the nutrient management plan.</p> <p>A Word document reconstructs a chronology of facts around the effluent spill on the Grace-Mar farm in February 2017.</p>
<u>04 Order</u>	2016-07-29 to 2017-06-29	Folders, Emails, PDFs	<p>Several PDFs document the research undertaken to put the pollution abatement order together, verifying details about the Grace-Mar farm, including the processing and receipts of the order package and amendments.</p> <p>Several subfolders exist, including:</p> <ul style="list-style-type: none"> <li>2016-07-29 Order Amendment (approved)</li> <li>2017-03-01 Order Amendment (ENV initiated – additional requirements following effluent spill)</li> <li>2017-05-24 Order Amendment (approved)</li> <li>Action Plan</li> <li>Environmental Impact Assessment Terms of Reference and Report</li> <li>Nutrient Management Plan 2017</li> </ul>
<u>09 Compliance</u>	2016-02-01 to 2017-04-25	Folders, Emails	<p>This folder contains several subfolders relating to several inspections, administrative monetary penalties associated with the effluent spill in February 2017, and photos and other inspections information gathered.</p> <p>4 emails are also contained re: a complaint against Grace-Mar farms that ENV staff followed up on.</p>

File	Dates	Documents	Description
<b>Orders Information re: Curtis Feedlot</b>			
<u>01 Correspondence</u>	2016-05-17 to 2017-06-06	PDFs, Emails, Word	Files in this folder contain correspondence between Curtis Farms and ENV staff re: the pollution abatement order package and the order requirements, concerns about the costs of meeting the requirements of the order, confirmation of participation in the post-harvest nutrient study, and correspondence halted due to the EAB appeal, and a safety notice among ENV internal staff, not to enter the property alone.
<u>04 Order</u>	2016-05-19 to 2017	Folder, PDFs	Documents in this folder are all related to assembling the Curtis pollution abatement order, including the draft that was sent out for comment, the final that was issued, research undertaken to verify the details of the operation, and confirmation of the order delivery. The subfolder contains a draft pollution prevention order from June that was not sent, and research undertaken to contribute to the contents of the order.
<u>08 Appeals</u>	2016-06-27 to 2017-06-05	Emails, PDFs, Word	15 Emails from internal government staff (ENV, Ministry of Justice, AGRI, FLNR) regarding details of the appeal, who will be attending, what information will be presented, etc. PDFs include SSWD's statement of points, as well as a copy of the appeal decision, and an EAB process document.
<u>09 Compliance</u>	2016 April, 2016 July, and 2017 Jan	Folders	This folder contains three subfolders (dates given) re: inspections and their results during 2016 and 2017. The subfolders contain photos from the site inspections, research undertaken to verify the details of the operation, and the inspection reports, and looking back to compare with the requirements of the original pollution abatement order.
<b>Orders Information re: Purple Springs Nursery</b>			
<u>01 Correspondence</u>	2016-05-09 to 2017-07-31	Emails, PDFs, Word	49 emails document correspondence between various ENV staff and Purple Springs re: the requirements of the pollution prevention order, assessing the qualified professionals helping them, responding to the Record of Decisions (used in the Ken Regehr Farm appeal), updating of the Farm Book, separating the Purple Springs Nursery from the Ken Regehr Farm pollution abatement order, on-site upgrades undertaken by Purple Springs (wetland and pond), and subsequent updates. PDFs and Word docs support these documents and their submissions.
<u>04 Order</u>	2016-05-17 to 2017-04-21	Emails, PDFs, Word	This folder contains documents directly relevant to the pollution abatement orders (and drafts) issued to Purple Springs Nursery, including its receipt and research undertaken to verify operator details.

File	Dates	Documents	Description
<u>06 Maps-Photos</u>	Aug 2016 to June 2017	Folders	Due to non-compliance with the pollution prevention order, this case was also referred to the Conservation Officer Service for investigation in 2016. 4 subfolders (Aug 2016, June 2017, March 2017, and May 2017) contain photos taken during on-site inspection visits.
<u>07a Data-Rpts</u>	2017-05-01	Email, PDFs	One email contains the 2017 Q1 update from Purple Springs. One PDF contains the ENV best management practice guidelines for the <i>Organic matter Recycling Regulation</i> and <i>Soil Amendment Code of Practice</i> . The other is the Ontario production of compost guidelines.
<u>08 Appeals</u>	2016-08-09 to 2016-08-17	Emails	5 emails document internal government correspondence re: the EAB appeal and its dismissal.
<u>09 Compliance</u>	2016, 2017	Folders, PDFs, Emails	This folder contains subfolders for Feb 2016 and Aug 2016 inspections activities (and their associated photos and documentation). Additionally, the 2017 inspection report is included.
<b>Orders Information re: Ken Regehr Farm</b>			
<u>01 Correspondence</u>	2016-08-02 to 2017-06-29	Emails, PDF, Word, Excel	This correspondence pertains to various exchanges between and among ENV, FLRN, AGRI and IHA staff and the Ken Regehr Farm, including questions, action plan posting, the environmental impact assessment, manure spreading, followups, inspection reports, and requirements of the order, and documents shared relating to the order, inspection reports, and action plan.
<u>04 Order</u>	2016-05-30 to 2017-01-11	Emails, PDFs, Word	These 9 emails and associated PDFs document the pollution prevention order issued to Purple Springs Nursery, including draft and final packages and their delivery receipt. Information researched contributing to verifying the operation details is included.
<u>06 Maps-Photos</u>	2016-08-08, June 12 2017	Folder, PDFs	2 PDFs contain maps aquifer vulnerability and overlay with Ken Regehr property, and on-site photos from a 12 June inspection.
<u>07 a Rpts-Data</u>	2016-12-16; 2017-06-21	Folders, Emails, PDFs, Word	There are 2 subfolders specific to the action plan and correspondence and files and the Terms of Reference. For example, in the Terms of Reference folder: 29 emails between ENV, FLNR, and AGRI staff and the consultants hired to help the Ken Regehr Farm meet their pollution abatement order requirements clarified details of the terms of reference and work plan and associated reports, as well as the environmental impact assessment and amendments. The PDFs are the various reports and documents that needed to be submitted and

File	Dates	Documents	Description
<a href="#">08 Appeals</a>			approved: the work plan and terms of reference, official government letters in response, and confirmation of dates for the submission of various reports. In the main folder, two emails account for the preliminary results of the post-harvest nitrate study and completion of an action plan item.
	2016-08-05 to 2106-12-12	Emails	20 emails document correspondence exchanged regarding the appeal filed with the Environmental Appeal Board regarding the pollution abatement order.
<a href="#">09 Compliance</a>	2016 Feb, 2017 Feb, 2017 June	Emails, folders	These subfolders and emails document inspections actions taken at the Ken Regehr Farm, according to the dates listed. Each subfolder contains documents and photos regarding the site visits for compliance verification, and the inspection reports. Additionally, two emails, from 2016-11-30 re: spreading of manure on the farm lands, in contravention of the Agricultural Waste Control Regulation and the requirements of their order. There is a request for the Conservation Officer Service to respond.
<b>Orders Information re: Heavenly Feathers</b>			
	2016-05-10 to 2016-05-17	Email, Word, PDFs	Documents including notes from conversations between Heavenly Feathers and ENV staff, as well as the draft pollution abatement order, and the letter advising that the pollution abatement order would not be issued because Heavenly Feathers is not currently in operation. Research verifying the business details is included.
<b>Orders Information re: Card</b>			
	2016-05-10 to 2016-05-16	Email, photos, PDFs	This folder contains several documents re: the draft pollution abatement order sent to the Card feedlot, and the decision not to issue the pollution abatement order. This decision was based on information provided by Mr. Card about the small size of the herd, their grazing space, and the pen storage used for manure. One subfolder contains two images taken from a site visit.
<b>Compliance information for all operators</b>			
<a href="#">09 Compliance</a>	2016-05-03 to 2017-08-31	Word, Emails, Excel, PDF	This folder contains a higher-level look at the compliance actions taken to respond to the Hullcar Aquifer issue so far, such as a table that collates an overview of all the orders and their requirements, and several iterations/updates of the status of orders issued to Hullcar operators, and communication plans to coordinate information to the right parties. Additionally, a copy of the <i>Agricultural Waste Control Regulation</i> is contained in this folder.



