

TO: Mayor Savage and Members of Halifax Regional Council

Original Signed by 

SUBMITTED BY:

Kelly Denty, Executive Director, Planning and Development

Original Signed by 

Jacques Dubé, Chief Administrative Officer

DATE: October 6, 2021

SUBJECT: **Port Wallace Secondary Planning Process, Environmental Update and Revised Work Plan**

ORIGIN

On March 27, 2018, Regional Council passed the following motion:

1. *THAT Regional Council direct staff to:*
 - (c) *report back to Council with further information from Nova Scotia Environment regarding development activity in the vicinity of Barry's Run.*

On December 4, 2018, Regional Council passed the following motion:

THAT Halifax Regional Council direct staff to:

1. *Conduct an environmental assessment of the HRM-owned lands along Barry's Run and Mitchell's Brook that would form part of the proposed Port Wallace development PID 41301789 and 41376898) (See Attachment A of the staff report dated November 19, 2018, Figure 3.5.1 of the WSP Land Suitability Analysis, generally shown as Area F); and*
2. *Report the findings of the environmental assessment work to Regional Council prior to returning to them with a final recommendation report for the Port Wallace Secondary Plan project.*

On November 12, 2019, Regional Council passed the following motion:

THAT Halifax Regional Council direct the Chief Administrative Officer to:

- 1. Direct staff to proceed with the Port Wallace Secondary Planning work plan, as outlined in the Discussion section of the staff report dated October 15, 2019, and return to Council for direction on the secondary planning process after Nova Scotia Land Inc. completes the risk assessment and management plan for the former Montague Gold Mines site, including the Municipally-owned lands surrounding Barry's Run and any other third-party impacted lands located within the secondary planning study area.*
- 2. Initiate a process to consider amendments to applicable secondary municipal planning strategies and land use by-laws to enable industrial and highway commercial development on the Conrad Quarry lands, consistent with the policy direction outlined within the Discussion section of the staff report dated October 15, 2019 and follow the public participation program for municipal planning strategy amendments as approved by Regional Council on February 27, 1997.*
- 3. Monitor progress with the Province on the determination of the risk assessment and management plan for the Municipally owned land surrounding Barry's Run and any other third-party impacted lands located within the Port Wallace Secondary Plan study area and report back to Council with an update within the next six months.*

LEGISLATIVE AUTHORITY

Halifax Regional Municipality Charter (HRM Charter), Part VIII, Planning & Development

RECOMMENDATION

It is recommended that Halifax Regional Council direct the Chief Administrative Officer to:

1. Direct staff to proceed with the revised Port Wallace Secondary Planning work plan, as outlined in the Discussion section of this report; and
2. Continue to work with Nova Scotia Lands Inc., Nova Scotia Environment and Climate Change and Nova Scotia Lands and Forestry, to better understand the risks and potential management strategies associated with the risk assessment and closure plan for the former Montague Gold Mine Site and future development in the Port Wallace Secondary Planning Study Area and report back to Council.

BACKGROUND

The 2014 Regional Plan identifies Port Wallace as one of three potential new or expanded communities located inside the Urban Settlement Designation that, within the life of the Regional Plan (2031), could be serviced with municipal wastewater and water services. The community design is subject to a secondary planning process involving extensive study, public engagement, and Regional Council approval. Council initiated the Port Wallace Secondary Planning process in March 2014.

Barry's Run is a watercourse and wetland/bog system that runs through the centre of the Port Wallace Secondary Planning Study Area (PWSPSA) and flows into Lake Charles. The Municipality owns land surrounding Barry's Run and the area has been impacted by the former Montague Gold Mine site, located several hundred metres upstream. The former mine site operated from 1862 to 1928 and intermittently

until 1940.¹ In December 2018, Council directed staff to conduct an Environmental Site Assessment of the Municipally owned lands located along Barry's Run and report back to Council prior to completing the secondary planning process. HRM commissioned Dillon Consulting to conduct the Environmental Site Assessment (ESA).²

In November 2019, staff reported back to Council that the ESA raised new public health and environmental concerns that may impact the overall design and feasibility of the proposed Port Wallace development. On August 23, 2019, notice of contamination, located on Municipally owned lands along Barry's Run, was provided to the Provincial Department of Environment, currently known as Environment and Climate Change (ECC). This initiated the Provincial contaminated sites process. Upon receipt of the notification, the responsible parties (Nova Scotia Lands and Forestry) have 180 days to complete an Environmental Site Assessment of the impacted property. As noted in correspondence addressed to the CAO from the Deputy Minister of ECC (Attachment A), work on the ESA is in-process. The letter details the remaining steps in the contaminated sites process, including: submission of a Remedial Action Plan; completion of Site remediation work; submission of a Confirmation of Remediation report; and submission of a Record of Site Condition or Declaration of Property Condition. ECC anticipates that extensions to the above noted timelines will be requested and may be granted up to May 9, 2022 or beyond, if subsequent requests for extensions are granted. Nova Scotia Lands Incorporated (NS Lands), a crown corporation whose mandate is to assess, and where required remediate, and redevelop crown-owned properties, is leading both the environmental assessment of Municipally owned lands along Barry's Run and the closure plan for the former Montague Gold Mine Site.

Since 2019, in accordance with Regional Council's direction, staff have been working closely with Nova Scotia Lands, ECC and Nova Scotia Lands and Forestry to better understand the risks and potential management strategies associated with the former Montague Gold Mine Site and future development in the Port Wallace Secondary Planning Study Area (PWSPSA). Regional Council also directed staff to return to Council for direction on the secondary planning process after Nova Scotia Lands completed the risk assessment and management plan for the former Montague Gold Mines site, including the Municipally-owned lands surrounding Barry's Run and any other third-party impacted lands located within the secondary planning study area. As of the writing of this report, the risk assessment and management plan for the former mine site have yet to be completed, however new information has been provided by NS Lands and their consultant through field work conducted in Barry's Run and Lake Charles. The following sections provide an update regarding the Barry's Run environmental review and the Port Wallace Secondary Planning process.

Barry's Run Environmental Review

In 1976, the former City of Dartmouth acquired lands along Barry's Run that once formed part of the control structures for the Shubenacadie Canal (Map 1). There is a history of gold mining to the northeast and upstream of Barry's Run in the Montague Mines area. This area is known to have significant levels of arsenic and mercury contamination from mine tailings. The Province of Nova Scotia (Department of Lands and Forestry) is the landowner of the former mine site. Most of the mine tailings produced from the mine site were discharged directly into Mitchell's Brook, which originates in Lake Loon and drains into Barry's Run and Lake Charles.³

In 2016, a Land Suitability Analysis (LSA) was completed by WSP Canada Inc. to assess the environmental and cultural assets of the Port Wallace study area.⁴ The LSA included a desktop review of potential contaminated sites and highlighted past research that found high concentrations of arsenic in well water as

¹ M.B. Parsons, K.W.G. LeBlanc, G.E.M Hall, A.L. Sangster, J.E. Vaive and Pelchat. 2012. [Geological Survey of Canada Open File 7150: Environment geochemistry of tailings, sediments and surface waters collected from 14 historical gold mining districts in Nova Scotia](#). Natural Resources Canada, p. 82.

² [Dillon Consulting Limited Report. 2019. Halifax Regional Municipality, Phase I/II Environmental Site Assessment](#). Port Wallace, Dartmouth, Nova Scotia.

³ Parsons. [Geological Survey of Canada](#). p. 82

⁴ WSP Canada Inc. 2016. [Land Suitability Analysis: Port Wallace Secondary Planning Study Area](#).

well as stream waters, stream sediments, alder twigs and the waters that flow into Barry's Run. The LSA field investigation found tailings of significant size and strong metallic odour at the historic Montague Gold Mine site located east of the secondary planning study area. The LSA identified Barry's Run as constrained for development, given the contamination risks and the area's value as a wetland, wildlife corridor, and cultural landscape.

In March 2018, Regional Council considered the results of the Port Wallace Capital Cost Contribution Analysis⁵ which evaluated the cost of providing municipal services to the PWSPSA. The Study identified a preferred community concept design and the associated infrastructure upgrades as a basis for allocating capital costs between developers and the Municipality, and for preparing land use planning documents. Based on the LSA, the preferred concept design avoids any development on Barry's Run, but did identify an important collector road crossing and proposed adjacent park space and recreational trails. Given the potential environmental risks, Regional Council directed staff to consult with Nova Scotia Environment about potential development activity next to Barry's Run and report back to Council with the information while continuing to proceed with other components of the secondary planning process.

In December 2018, Regional Council directed staff to conduct an Environmental Site Assessment (ESA) of the Municipally-owned lands along Barry's Run⁶ (Map 1), after being informed by Nova Scotia Environment that a Phase II Environmental Site Assessment would likely be required. The Municipality retained Dillon Consulting Limited to conduct the ESA for the Municipality-owned properties. The Phase I ESA historical review demonstrated that there is contamination in sediment and surface water due to historic mining activities up stream of the subject site at the former Montague Gold Mines. Given the findings of the Phase I ESA, a Phase II ESA was completed to provide information on sediment contamination, general distribution, and metal concentrations in surface water. Sediments were obtained using several sampling techniques. In addition, the organic deposits (i.e. bog/fen complex), which is found along the sides of Barry's Run was manually probed to determine the depth of the organic material and potential presence of deeper underlying contaminated sediments.

The lab results from the sediment samples demonstrated that the bog/fen has been evolving over thousands of years and that the sediment underlying it are typical of the local geology. Sediments in the channel were found to be contaminated by heavy metals (arsenic and mercury), both in the more recent organic deposits as well as the underlying sediments made up mainly of mine tailings. Historic information and remaining structures at the outflow to Barry's Run indicate there was once a dam present that may have been used to either control flows or flood the bog/fen area to capture tailings, possibly up to the edge of the treeline. Although not part of the Phase II ESA scope, it is possible that tailings may have contaminated the surface vegetation root zone of the bog/fen if historic flooding occurred, creating additional potential human health and ecological risks. Due to the shallow water depths near the upstream brook areas, additional human or ecological health risks may be associated with sediments if they are disturbed by activities such as fishing, wading or the use of off-road vehicles. Local residents also fish within the subject site and may represent a human health issue if fish are consumed.

Although the Phase II ESA was not meant to fully delineate or calculate volumes of contaminated material, the study made several conclusions and recommendations. As NS Lands is currently conducting a study to assess the upstream former Montague Gold Mines and tailings, the study recommended that any final risk controls or management for the subject site be coordinated with the outcomes of the mine study to provide an overall/consistent risk control framework.

Based on Dillon's understanding of the subject site, including the subject site's current uses and proposed future residential development on adjacent properties, the following exposure scenarios and receptor pathways were identified as likely applicable:

- Children playing in the bog/fen complex for recreational purposes;

⁵ CBCL Limited and Upland Planning and Design. 2018. [Port Wallace Capital Cost Contribution Analysis Baseline Study: Final Report.](#)

⁶ Dillon. 2019. [ESA.](#)

- Children playing in shallow portions of Mitchell's Brook for recreational purposes (fishing, walking their dog, etc.);
- Fishing activities and fish consumption; and
- Impacts to ecological receptors (insects, fish, birds, etc.).

Until further information is known about potential risks to human health and ecological receptors, access to the subject site for recreational use and fishing should be carefully evaluated. A risk assessment was recommended to obtain data concerning potential risks to human health and ecological receptors. In August of 2019, staff issued a risk advisory including, notices to surrounding residences, land-owners, and placed signage on the Barry's Run site to ensure potential risks were communicated.⁷ As of the writing of this report, the risk advisory is still active.

Acadia University conducted a supplemental study of near surface sediments to detail metal concentration distribution with depth (top 300mm sediment layer) in Barry's Run. The study found evidence to suggest that, while there may have been a historic period where Barry's Run was recovering, there are now near surface sediments with arsenic concentrations similar to old tailing deposits. This provides evidence that the fen is still acting as a catch basin for arsenic impacted tailings originating in upstream areas (Montague Gold Mine) and that these materials continue to move into Barry's Run. The upper sediment layers of Barry's Run are very fine with a mix of organic and clay-size particle that can be easily mobilized if disturbed. The proposed development on properties adjacent to the subject site has the potential to change stormwater flow volumes and increase the mobilization of tailings.

The hydrology of the subject site was not assessed as part of the ESA. However, the stability of the bog/fen complex is likely susceptible to changing hydrology on adjacent lands. For the potential future development of adjacent properties, the assessment notes the need to consider buffer zones to maintain stability of the bog/fen complex. Any increase in stormwater flows from potential development located adjacent to the subject site should be prohibited unless it can be demonstrated to not disrupt the bog/fen complex integrity or mobilize more tailings into or through the system.

The ESA findings for Lake Charles provide evidence that lakebed sediments with arsenic impacted tailings from the 1900's are now being covered by new cleaner material, with arsenic concentrations similar to those prior to the operation of the Montague Gold mine or urban development. NS Lands and their consultants have been working to complete a new study with HRM's permission. The new study involved more sediment, surface water and fish tissue sampling and chemistry analysis, as well as a human health risk assessment (HHRA) to assess the potential for health effects in people using Barry's Run and Lake Charles for recreational activities such as swimming, hiking or fishing. This study is still in progress, however findings related to the HHRA's for both Barry's Run and Lake Charles are presented in the Discussion section of this report.

Port Wallace Secondary Planning Process

Port Wallace was first identified in planning documents as one of several potential greenfield development areas within the 2006 version of the Regional Plan based on the potential low cost of providing municipal services. Given this policy direction, the Municipality completed studies needed to assess the costs and feasibility of enabling urban development in the area, including:

- The Cost of Servicing Plan: Regional Planning Greenfield Sites (CBCL Ltd., February 2009),⁸ which reviewed the costs of providing services to a number of potential greenfield development sites; and
- The Shubenacadie Lakes Subwatershed Study (AECOM, April 2013)⁹ which reviewed the health of the lakes system and concluded that Port Wallace could be developed while maintaining acceptable lake water quality provided that stormwater is effectively managed.

⁷ HRM Website. 2019. [Barry's Run Risk Advisory](#).

⁸ CBCL Limited. 2009. [Cost of Servicing Plan: Regional Planning Greenfield Sites](#). Halifax Regional Municipality.

⁹ AECOM. 2013. [Shubenacadie Lakes Subwatershed Study – Final Report](#). Halifax Regional Municipality.

In March 2014, Regional Council formally initiated the Port Wallace Secondary Planning process to assess the site in greater detail, prepare infrastructure plans, engage the community, and ultimately prepare land use planning documents and infrastructure cost charges for Council's consideration.¹⁰ The following summarizes the key secondary planning milestones completed to date:

- The Port Wallace Public Participation Committee (PPC) was formed in 2014 to provide feedback to staff and consultants on various studies, guide community engagements and make recommendations on planning documents to the North West Community Council and the Harbour East Marine Drive Community Council. The PPC consists of 8 members who are residents of the Port Wallace community and have been meeting on an as needed basis since 2014;
- In 2016, a Land Suitability Analysis (WSP, Feb. 2016)¹¹ was completed to assess the environmental and cultural assets of the site;
- In 2016, Council directed staff to include the Conrad Quarry lands (residential and industrial areas) in the Secondary Planning process;¹²
- In March 2018, following completion of a public hearing for [Case 20800](#) (MPS and LUB amendments to allow industrial and highway commercial uses on the Conrad Quarry Lands),¹³ Regional Council directed that further consideration of the request for industrial and commercial uses on the entire Conrad Quarry lands in Waverley to the Port Wallace Secondary Planning Process;¹⁴
- In March 2018, Regional Council considered the Master Infrastructure Study (CBCL, Jan. 2018) and directed staff to prepare a capital cost contribution study and proceed with preparing secondary planning documents based on the preferred concept identified through the Study;¹⁵
- In September 2018, draft Secondary Municipal Planning Strategy (SMPS) and Land Use- By-law (LUB) amendments were presented to the PPC and project stakeholders for review and feedback.¹⁶
- In December 2018, Regional Council directed staff to conduct an Environmental Site Assessment of the Municipally owned lands along Barry's Run¹⁷;
- In November 2019, Council directed staff to initiate a process to consider amendments to applicable secondary municipal planning strategies and land use by-laws to enable industrial and highway commercial development on the Conrad Quarry lands, consistent with the specific policy direction outlined within the Discussion section of the staff report dated October 15, 2019,¹⁸ and to follow the public participation program for municipal planning strategy amendments as approved by Regional Council on February 27, 1997; and
- In November 2019, following consideration of the results of the Environmental Site Assessment (ESA), Regional Council directed staff to proceed with the Port Wallace Secondary Planning Workplan. Given concerns that Barry's Run was acting as a catch basin for arsenic impacted tailings and that the mine closure management plan may have significant impacts on the proposed community design, the workplan was designed to advance some technical components of the project while ensuring that environmental risks were thoroughly studied and managed. The workplan is presented in greater detail in the Discussion section of this report.

DISCUSSION

Staff continue to advance the Port Wallace Secondary Planning Workplan and respond to direction provided

¹⁰ HRM Staff Recommendation Report. 2014. [Public Participation Program – Port Wallace](#). Halifax Regional Municipality.

¹¹ WSP. 2016. [LSA](#).

¹² HRM Staff Recommendation Report. 2016. [Port Wallace Secondary Plan](#). Halifax Regional Municipality.

¹³ HRM Staff Recommendation Report. 2018. [Case 20800: Municipal Planning Strategy and Land Use By-law amendment to allow for industrial and highway commercial uses on the Conrad Quarry lands in Waverley](#)

¹⁴ [Halifax Regional Council Meeting Minutes](#). March 27, 2018.

¹⁵ HRM Staff Recommendation Report. 2018. [Port Wallace Master Infrastructure Study, Urban Service Area Expansion, and Plan Amendment Request \(Case 21601\)](#). Halifax Regional Municipality.

¹⁶ HRM. [Meeting Notes: September 27, 2018](#). Port Wallace Public Participation Committee.

¹⁷ HRM Staff Recommendation Report. 2018. [Port Wallace Environmental Investigation](#). Halifax Regional Municipality.

¹⁸ HRM Staff Recommendation Report. 2019. [Port Wallace Secondary Planning Process and Environmental Investigation Near Barry's Run](#). Halifax Regional Municipality.

by Regional Council in November 2019. Based on new information received from NS Lands and Environment and Climate Change (ECC), staff advise that consideration of a revised workplan is warranted in advance of completion of the risk assessment and management plan for the former Montague Gold Mines site. The following section details new information received from NS Lands, identifies progress made on the 2019 work plan to date and outlines recommended changes to the workplan going forward.

NS Lands Inc. Conceptual Closure Study and Risk Assessment Findings

In 2018, NS Lands Inc. (NS Lands) commissioned Intrisik Corporation (Corp.), who led a team of specialist consultants (EcoMetrix, Klohn Crippen Berger and Wood), to complete a conceptual closure plan for the Montague Mine site. The [report](#)¹⁹ presented a high-level conceptual closure plan for the mine tailings that have been deposited in the former Montague Mine site. This work included: the results of a field program; possible closure options for the tailings developed at a conceptual level; approximate costs; and an implementation schedule for the project. The next stage of design is to conduct further study to refine the concept plan and to move the conceptual plans to a pre-feasibility and feasibility level design so that accurate cost estimates and implementation schedules can be developed and permitting can be obtained. After approval is granted for the remediation, then detailed designs will be completed with development of construction packages (tender drawings and specifications). NS Lands has advised that approval of the remediation and the issuance of tenders may occur as early as the summer of 2022.

As part of efforts to move the conceptual plans to pre-feasibility and feasibility level design, Intrisik Corp. is currently working on the next stage of design work. This work includes several deliverables, including:

1. An overall risk assessment to refine site specific remediation criteria;
2. Field investigations of soil and surface water sampling (including on Non-Crown owned lands);
3. A human health risk assessment of Lake Charles; and
4. A stakeholder consultation program.

Many of the above noted assessments and field investigations have been completed or are in-progress. NS Lands has indicated that findings related to the overall risk assessment may become available this fall. Following this step and more detailed design, an active community engagement process led by Nova Scotia Lands will commence.

Human Health Assessment of Sediment, Surface Water, and Fish from Lake Charles

Since 2019, NS Lands has advanced a [human health risk assessment of sediment surface water, and fish from Lake Charles](#).²⁰ A summary of the assessment has been published on the [NS Lands website](#).²¹ In brief, the assessment identifies the following:

- Exposures to arsenic in surface water, sediment and fish tissues are low;
- Exposures to arsenic while swimming in Lake Charles and consuming fish from Lake Charles are estimated to be so low that any risks are considered to be negligible, or insignificant;
- The public beach at Shubie Park does not have elevated arsenic levels in sediment, and risks from swimming or using the beach in this area are considered to be insignificant;
- Mercury is not of concern for human health in Lake Charles. Consumption of fish tissues was not associated with elevated risk levels, as long as people respect the [Provincial fish consumption guidelines](#) (Province of Nova Scotia, 2019);²²
- Arsenic is present in surface waters and sediments in Lake Charles at levels that are higher than those expected for natural background conditions;
- The presence of arsenic in the lake is due to both natural occurring arsenic in regional geologic materials as well as releases over many years from the Montague Mine site;

¹⁹ Intrisik Corporation, EcoMetrix, Klohn Crippen Berger and Wood. 2019. [Conceptual Closure Study for the Historic Montague Mines Tailings Areas, Halifax, Nova Scotia](#).

²⁰ Intrisik Corporation, EcoMetrix, Klohn Crippen Berger and Wood. 2020. [Human Health Risk Assessment of Sediment Surface Water, and Fish from Lake Charles, Halifax Regional Municipality](#).

²¹ Nova Scotia Lands Inc. Website: <http://www.nslands.ca>

²² Environment and Climate Change. 2019. [Fish Consumption Advisory](#). Province of Nova Scotia.

- The closure plan of the historical mine site is important to implement in order to reduce the transport of tailings and other solids as well as affected waters from the former mine site downstream into Lake Charles;
- The closure planning project underway for the Montague Mines site is expected to further reduce concentrations of arsenic (and mercury) in surface waters, and suspend sediment deposition in downstream areas including Lake Charles; and
- No specific management is recommended for Lake Charles.

Barry's Run Human Health Risk Assessment

In response to the results of the 2019 ESA conducted by Dillon Consulting and the risk advisory by HRM, an additional [study](#)²³ was commissioned by Nova Scotia Lands. The study provides the results of additional data collection and assessment for Barry's Run, which include sediment, surface water and fish tissue sampling and analysis, as well as a human health risk assessment study (HHRA) to assess the potential risks related to people using Barry's Run for recreational activities such as swimming, hiking or fishing. The focus of the study was on sediments, surface waters, fish tissues, and soils from the fen area (marshy area located along the sides of the watercourse), and whether the measured concentrations of contaminants could pose a risk to people using the area. Some of the results of the assessment were as follows:

- Given current levels of arsenic in sediments within Barry's Run and based on the assumptions related to current usage and exposure, risks are considered low, as the predicted exceedances are marginal using relatively high exposure scenarios which are likely conservative assumptions;
- Based on the results of the assessment, there is no need for additional risk management at this time, and the existing risk management approach (signage) should remain in place, in order to reduce the potential for sediment disturbance and mobilization downstream while a final closure plan for Montague Mines is being completed;
- Infrequent swimming in Barry's Run and Mitchell's Brook within the Study area boundary (less than 20 times a year) is estimated to have negligible risk levels for both arsenic and mercury, as long as sediment exposure is minimized. Negligible risk means that the exposures are so low they are considered to have an insignificant impact on human health;
- Sediment contact related to wading or swimming activities within Barry's Run and Mitchell's Brook was predicted to have negligible risk related to mercury;
- It is recommended that sediment contact be minimized until exposure assumptions can be further adjusted based on improved knowledge of public usage and as future land use in and around Barry's Run is more defined; and
- The fen is likely acting as a sink for arsenic impacted sediments from upstream areas. Future land development involving release of storm waters to this area, or disturbance of sediments by public users (through off-road vehicle usage in upgradient stream areas or on exposed tailings at the Montague Mines site), has the potential to mobilize sediments in these areas and transport them further downstream into Lake Charles, if not properly managed.

Status of Work Plan and Recommended Changes

In keeping with the Regional Council direction and the approved 2019 workplan, HRM staff have been advancing technical components of the projects while ensuring that environmental risks are thoroughly studied and managed. Results of the 2019 ESA, conducted by Dillon, led staff to advise Regional Council that it would not be possible to ensure that the proposed Port Wallace development would not negatively impact human or environmental health until more information was known about the risks and management strategies that are being prepared through the former Montague Gold Mine closure process.

Since 2019, staff has been working with the Province of Nova Scotia and its associated departments and agencies, to understand how contamination from the former Montague Gold Mine will potentially impact development of the Port Wallace lands as well as HRM's lands along Barry's Run. Work between staff and

²³ Intrisik Corporation, EcoMetrix, Klohn Crippen Berger and Wood. 2020. [Human Health Risk Assessment of Sediment, Surface Water, and Fish from Barry's Run, Halifax Regional Municipality.](#)

the Province of Nova Scotia is ongoing, however new information has been received which provides greater understanding of the anticipated closure plan for the Montague Mines site and the human health risk associated with the Port Wallace lands, Barry's Run and Lake Charles. Staff have also received information pertaining to the anticipated role the Province of Nova Scotia, through the Department of Environment and Climate Change, will play in reviewing technical aspects of any proposed development within the Port Wallace Secondary Planning Study Area, including requirements related to stormwater management and the protection of Barry's Run and Lake Charles (Attachment A). Given this context, the following table outlines the status of the 2019 workplan for the Port Wallace Secondary Planning process and recommends actions regarding how to proceed with each component:

Workplan Component:	Status:	Recommended Action:
1. NS Lands Mine Closure Process:	<p>NS Lands is in the process of preparing studies to refine their 2019 Concept Mine Closure plan and to move to a pre-feasibility and feasibility level design so that accurate cost estimates and implementation schedules can be developed and permitting can be obtained. NS Lands has advised that approval of the remediation and the issuance of tenders may occur as early as the summer of 2022.</p> <p>Staff have worked closely with Nova Scotia Lands and stakeholders to discuss concept development plans and the findings of studies related to Barry's Run and the closure plan for the former Montague Mine site.</p>	<p>Continue to:</p> <ol style="list-style-type: none"> 1. Support NS Lands work by sharing information and providing access to Municipal lands; and 2. Work with Halifax Water and project stakeholders to ensure that the risk assessments and management plans consider the Port Wallace development concepts prepared to date.
2. Land Use Policies and Regulations:	<p>As previously directed by Council, staff have prepared draft SMPS and LUB documents based on the preferred community concept design identified in the master infrastructure study. While these planning documents are largely complete, in 2019, staff advised that these documents could not be completed until more information on environmental risks and management strategies became available through the NS Lands mine closure process. Since 2019, new information has been provided regarding the mine closure process and risk assessments. As such, staff are of the opinion that work can resume on completing the SMPS and LUB documents. These documents can be considered by Council in advance of completion of a mine closure plan and associated environmental management studies, provided proposed plan policy incorporates recommendations outlined in the studies and conditions for approval by other levels of government to ensure compliance with the mine closure plan and remediation strategies.</p>	<p>Proceed with the preparation of draft SMPS and LUB documents for consideration by Regional Council.</p>

<p>3. Capital Cost Contributions</p>	<p>Similar to draft planning documents, prior to 2019, staff advanced capital cost contribution work as much as possible while awaiting the results of the environmental reviews and risk assessments. Capital cost contributions are needed to allocate capital costs for shared infrastructure between developers, Halifax Water and the Municipality, and rely on land use plans to fairly distribute development densities and associated infrastructure costs between landowners. Following receipt of new information regarding the mine closure process and risk assessments, further work on capital cost contributions can resume in conjunction with updated draft secondary planning documents that reflect environmental management strategies being prepared through the NS Lands mine closure process.</p>	<p>Resume capital cost contribution work in conjunction with updated draft secondary planning documents.</p>
<p>4. Shubie Park Utility Corridor</p>	<p>In order to support additional growth in the Port Wallace area, a new wastewater force main connection is required through Shubie Park and the Shubenacadie Canal. As the area is environmentally and culturally sensitive with significant construction constraints, staff have been working with Halifax Water, other utilities and the Province to advance utility corridor designs and clarify the provincial approvals required. The proposed utility corridor crosses over both HRM and Provincial parkland. The Nova Scotia Department of Lands and Forestry, which is responsible for the Canal, had indicated that its approval process may take up to two-years to complete.</p> <p>Work related to the Shubie Park Utility Corridor has continued to advance as the design of the utility corridor is not related to the NS Lands mine closure process. This has enabled the lengthy mine closure and Canal crossing approval processes to proceed in parallel. Currently, staff are working with Water and the Department of Lands and Forestry to finalize the technical components of the Shubie Park Utility Corridor.</p>	<p>Continue to support Halifax Water and advance work related to the establishment of the Shubie Park Utility Corridor.</p>
<p>5. Public Engagement</p>	<p>Public and stakeholder consultations will be carried out by NS Lands as part of the Montague Mine closure process. Consultations will also be required as part of the Provincial approval process for the</p>	<p>Reconvene meetings of the Public Participation Committee (PPC) and proceed with public engagement activities</p>

	<p>Shubenacadie Canal crossing. In 2019, staff advised that since secondary planning documents could not be advanced, staff would not schedule Public Participation Committee (PPC) meetings or carry-out further public engagement activities until the Municipality incorporates the results of the mine closure process into draft SMPS and LUB documents.</p> <p>Staff also acknowledged that the secondary planning process has taken longer than initially anticipated and the environmental studies may take some time to complete. As such, staff provided PPC members with the opportunity to step down from the committee. As the planning policy work is recommended to resume, staff have revisited committee membership and have advertised for vacant positions. Staff will also proceed with public engagement activities following completion of the draft planning documents.</p>	<p>following completion of the draft planning documents.</p>
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Conrad Quarry Lands

The proposal to enable industrial and highway commercial developments on the Conrad Quarry lands (Map 1) was previously considered by Council through a separate planning process (Case 20800). In March 2018, Council folded the proposal into the secondary planning process to provide further opportunities for public engagement and review. These lands, however, are located outside of the Barry's Run sub-watershed and could be developed without interfering with the mine closure process. Given the Conrad Quarry lands existing industrial uses, proximity to the 100 series highway, and the work already completed, in 2019, Council directed staff to initiate a new MPS amendment process, independent of the secondary planning process, to consider industrial and highway commercial uses on the Conrad Quarry lands.

A public information meeting was held for this Council-directed project on Wednesday, February 12, 2020. Staff have continued to advance the project through the MPS and LUB amendment process and anticipate that a staff recommendation report will be tabled with Harbour East Marine Drive Community Council and Halifax Regional Council for consideration this fall. A public hearing is required prior to any decision of Council on this matter.

Conclusion

Since 2019, staff have continued to advance technical components of the approved Port Wallace Secondary Planning Process workplan. During this time, staff have also received new information from NS Lands, including a conceptual closure study for the Montague Mine site, and human health risk assessments of sediment, surface water, and fish from Barry's Run and Lake Charles. Discussions between municipal and provincial staff have contributed to a greater understanding of the anticipated final closure plan process for the Montague Mines site. In view of this new information, it is recommended that Council direct staff to follow a revised workplan, whereby all components of the Port Wallace Secondary Planning Process can proceed, while also continuing to work with the Province to ensure that environmental risks are thoroughly studied and managed.

FINANCIAL IMPLICATIONS

The former Montague Gold Mine site is owned by the Province of Nova Scotia and is known to be the source of contamination. The Municipally-owned Barry's Run lands are considered a third-party impacted site under the provincial Contaminated Sites Regulations and, therefore, the Province is responsible for conducting the needed studies and management plans. Any sharing of information needed to support the mine closure process can be carried out with existing staff resources.

There are limited financial implications associated with designing the Shubie Park utility corridor as design work will be funded by Halifax Water and/or Port Wallace developers and any needed technical support from HRM can be carried out with existing staff resources. Further information on utility corridor costs will be discussed in a subsequent staff report.

RISK CONSIDERATION

This report seeks to identify the current status of risks to human and environmental health, process and legal risks related to the proposed Port Wallace development.

COMMUNITY ENGAGEMENT

Environmental Site Assessment

As public safety is a primary concern of the Municipality, in August 2019, staff informed area residents and land owners about the potential health risks identified in the ESA. These communications included:

- making a public service announcement;
- publishing a webpage containing the Environmental Site Assessment and FAQs;
- placing advisory signs on Municipally-owned lands;
- mailing letters to nearby residents and land owners;
- informing all land owners involved in the Port Wallace Secondary Planning process; and
- informing the Port Wallace Public Participation Committee (PPC).

In addition, NS Lands indicates that it plans to carry out public consultations as part of the Montague Mine closure process.

Secondary Planning Process

The Port Wallace Secondary Planning process has involved a significant amount of community engagement. Specific engagement activities that have been completed include:

- an initial community workshop (June 2014);
- open houses to receive feedback on the LSA (May 2016);
- open house/meeting to receive feedback on initial development concepts (Nov 2016);
- regular feedback from the Public Participation Committee (PPC) on all aspects of the project (2014 – 2019); and

In accordance with the revised workplan, staff will proceed with reconvening the PPC and carrying out engagement activities following completion of the draft planning documents.

ENVIRONMENTAL IMPLICATIONS

This report provides information on contamination found in lands located along Barry's Run, Lake Charles and within the former Montague Mine site and the associated risks to human and environmental health.

ALTERNATIVES

Regional Council may choose to direct the CAO to:

1. Approve the proposed workplan subject to modifications. Modifications may require a supplementary report.
2. Suspend the Port Wallace Secondary Planning process and report back to Council for direction on the secondary planning process after Nova Scotia Lands Inc. completes the management plan for the former Montague Gold Mines site.

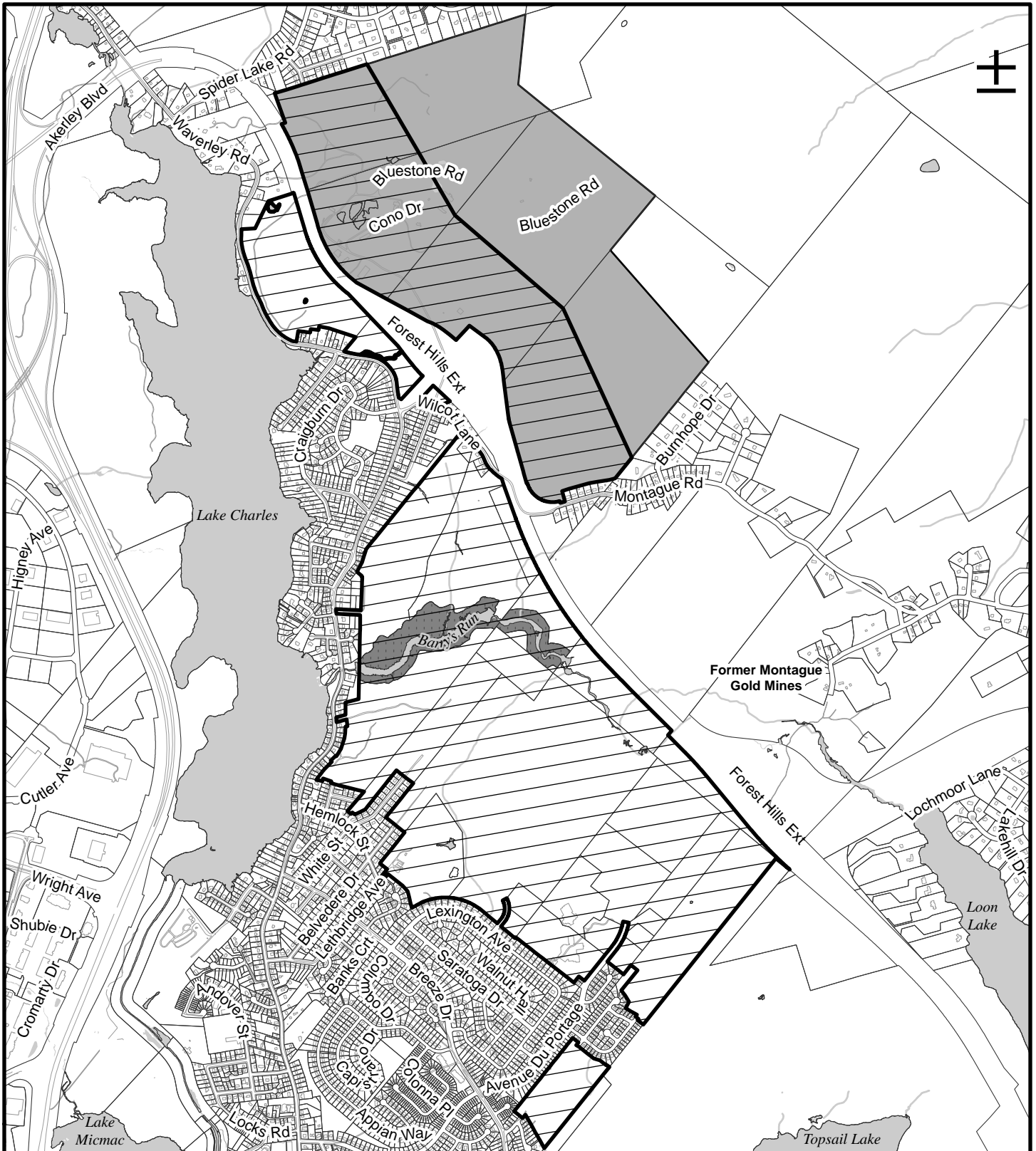
ATTACHMENTS

Map 1: Barry's Run – Port Wallace

Attachment A: Letter Addressed to HRM CAO from Deputy Minister of Environment and Climate Change




A copy of this report can be obtained online at halifax.ca or by contacting the Office of the Municipal Clerk at 902.490.4210.

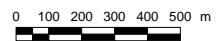
Report Prepared by: Tyson Simms, Planner III, 902.717.5309



Map 1

Barry's Run,
Port Wallace

-  Subject Area
-  Port Wallace Secondary Planning Study Boundary
-  Conrad Quarry Lands



The accuracy of any representation on this plan is not guaranteed.

10350-40-57626

August 9, 2021

Jacques Dube, CAO
Halifax Regional Municipality
dubej@halifax.ca

Dear Jacques Dube,

Thank you for your letter dated June 11, 2021 and our meeting on July 22, 2021. As discussed at our meeting I am writing to provide confirmation/additional information around three specific items outlined in your June 11 letter.

1). An outline of the procedural steps and timing of environmental remediation, site management, monitoring and/or a combination thereof, to address the contamination of Barry's Run, Mitchell's Brook and adjacent lands, including any affected third party lands;

Procedurally, the contaminated sites process is initiated when Environment and Climate Change (ECC) receives a Notification of Contamination from a Site Professional. Upon receipt of the Notification, the responsible parties have 180 days to complete an Environmental Site Assessment of the impacted property. The remaining steps in the contaminated sites process include submission of a Remedial Action Plan, completion of remediation work, submission of a Confirmation of Remediation report and submission of a Record of Site Condition or Declaration of Property Condition (i.e. closure document). These steps should be completed within 2-years of submitting the original Notification of Contamination. Please note that although these timelines are outlined in Regulation, the Regulations also allow for extensions to those timelines upon request.

With respect to the Barry's Run property, HRM provided Notification of Contamination to ECC on August 23, 2019. The Notification indicated that the property was a third-party impacted site, identifying the Montague Mines property as the source property. Based on the initial notification date, the Environmental Site Assessment report was originally due on March 10, 2020. ECC had received and granted a request to extend this due date and is currently in the process of reviewing an additional extension request that would extend the submission date for this Environmental Site Assessment Report to May 9, 2022.

Currently, the Remedial Action Plan, Confirmation of Remediation and Record of Site Condition for the Barry's Run property are due September 13, 2021. Although an extension request is anticipated, no request to extend the due date for these items has been received to date.

ECC is unable to comment on the status of any contaminated sites files relating to third-party impacted properties. Information relating to any third-party sites that are not owned by the Province or HRM would be subject to the Freedom of Information Process. Information around on the provincial Freedom of Information & Protection of Privacy Act process is available at the following website <https://novascotia.ca/nse/dept/foipop.asp>.

2). The Province's anticipated role in reviewing, approving and/or monitoring stormwater management plans and strategies which may impact the subject contaminated watercourses/lands; and

Section 7(2)(b) of the Activities Designation Regulations, designates the construction, operation or reclamation of storm drainage works as an activity that requires Approval from the department. To obtain a storm water Approval, the developer is required to make application to the department for review and consideration. Although the application and approval process is well defined, in the case of the proposed development surrounding Barry's Run, there must be consideration for stormwater discharge from the development and the impacts this might have on Barry's Run. Specifically, the concern relates to the potential for storm water to mobilize existing contamination in Barry's Run.

As a minimum, any storm water plan for this proposed development will have to meet ECC's standard requirements, which includes balancing of pre- and post flows; however, the department will also require the plan to be reviewed and accepted by the Site Professionals responsible for the Montague Mines and Barry's Run sites. The storm water plan proposed by the developer must be aligned with the final management plan (including any site specific or on-going monitoring requirements) for these sites. ECC will require the confirmation from the property owners and their Site Professionals before issuing a storm water Approval. To date, no storm water applications have been received for this proposed development.

3). The remaining procedural steps in finalizing a closure plan for the former Montague Gold Mines site.

The Notification of Contamination for the Montague Mines site was received on September 20, 2019. Based on the notification date, the Environmental Site Assessment was originally due on March 18, 2020. ECC had received and granted a request to extend this due date and is currently in the process of reviewing an additional extension request that would extend the due date for this Environmental Site Assessment report to May 17, 2022, although we do anticipate receipt of the Environmental Site Assessment report in the Fall of 2021.

Currently, the Remedial Action Plan, Confirmation of Remediation and Record of Site Condition/Declaration of Property Condition for the Montague Mines site are due September 13, 2021. Although an extension request is anticipated, no request to extend the due date for these items has been received to date.

Sincerely,

Original Signed

✓
Julie Towers
Deputy Minister
Environment and Climate Change

c: Paul LaFleche, Deputy Minister, Lands and Forestry, Transportation and Active Transit