



COMPREHENSIVE LIABILITY MANAGEMENT PLAN



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An aerial photograph of a forest landscape. In the foreground, there is a cleared area with sparse vegetation and a small stream. The background is a dense forest of evergreen trees.

Industry Pays

The BC Oil and Gas Commission's Comprehensive Liability Management Plan (Plan) ensures 100 per cent of the cost of reclaiming oil and gas sites in B.C. continues to be paid for by industry. The Plan details the steps and actions being taken by the Commission to protect public safety and safeguard the environment.

From exploration through to final reclamation, the Commission works closely with communities and land owners, and confirms industry compliance with provincial legislation.

The Commission's Plan:

- Holds industry accountable for all costs associated with the cleanup of oil and gas sites. Since the establishment of an orphan site reclamation fund, there has not been any cost to taxpayers from inactive or orphan site restoration.
- Makes B.C. the first province in western Canada to impose in law, timelines for the cleanup of wells. The Commission's goal is to ensure orphan sites are restored within 10 years of designation.
- Creates opportunities to collaborate with Indigenous communities on oil and gas well restoration. Partnership projects are underway to examine the role of traditional knowledge in restoration priorities.
- Addresses potential issues of corporate health or operational risk with companies before any development activity can take place.

There are more details on how the Plan works in the following pages, and some key terms to keep in mind include:

- Active well:** A well that is producing oil and gas and has a viable operator.
- Inactive well:** A well that has not met a threshold for producing or injecting gas or fluids, but has not yet been abandoned.
- Suspended well:** A well previously completed but is now no longer active and has been inspected and maintained to ensure long term well integrity and has a viable operator.
- Abandoned well:** A well that has been permanently plugged and the wellhead removed.
- Dormant site:** Wells and their associated operating areas that for five or more years have not met a certain threshold of activity, but still has a viable operator.
- Reclaimed Site:** A site that has been satisfactorily restored to its original state and may be eligible for a Certificate of Restoration, certifying it has met all necessary requirements.
- Orphan site:** An orphan designation is given by the Commission to wells and associated operating areas when the operator is insolvent or can't be located. This can happen in any stage and allows restoration work to move ahead, paid through the industry-funded Orphan Site Reclamation Fund.

The Commission's Plan is comprehensive, it's underway and it's working to reduce the number of inactive and orphan oil and gas sites in the province, while upholding the 'industry pays' model.

***The Commission's Plan
is comprehensive,
it's underway and it's
working...***

The Plan

The Commission is making substantive progress in managing oil and gas site cleanup and there's more work to be done. Working in collaboration with the provincial government, the Plan charts a clear path forward with effective tools to hold industry accountable for cleanup, address unrestored oil and gas sites, protect public safety and safeguard the environment.

The Comprehensive Liability Management Plan has three primary components:

- Liability management
- Improving the rate of inactive site restoration
- Addressing orphan sites

The Plan allows the Commission to address potential issues with companies prior to giving them a permit, and provides our decision makers with the information needed to make decisions where corporate financial health is a risk. We evaluate every transaction to make sure companies have the means to manage assets through to closure.

Cleaning up sites faster at the end of their productive life is one way we are reducing the overall number of inactive sites. Through legislative changes, the Commission is now working on prescribed timelines for decommissioning and reclamation of inactive wells, reducing the potential for orphaned wells.

The Commission is also setting a standard for orphan site restoration. The goal is to restore orphan sites, which make up just over one per cent of all oil and gas wells in B.C., within 10 years of designation. A change to the orphan levy ensures companies, not B.C. residents, remain responsible for orphan restoration costs.

New legislation enacted in May 2018 to amend the Oil and Gas Activities Act (OGAA), supports the Plan:

Permit Decisions

The Commission considers the conduct of companies when deciding whether to issue, suspend, transfer, cancel or amend a permit. This means the Commission can consider the company and/or person's history of compliance or pattern of conduct before making permit decisions.

Dormant Sites

The Commission is implementing regulations with requirements for type, amount and timing of work required on inactive and abandoned well sites.

Orphan Levy

Amendments to the industry-funded Orphan Site Reclamation Fund (OSRF) have shifted the funding model from a fixed tax on production to a new liability levy. This levy ensures proportional permit holder contributions, helping preserve the 'industry pays' approach.

It's the Law

The Commission has the legal tools to ensure oil and gas sites are restored in a safe, responsible and timely manner.

Amendments to the Oil and Gas Activities Act in May 2018 (Bill 15) help reduce the number of inactive, abandoned and orphaned sites in the province.

Spending on orphan restoration tripled to almost \$15 million for 2018/19. Increasing the levy paid by industry ensures all restoration continues to be paid for by industry alone.

The Commission is also:

- Enforcing a timeline for industry to restore sites.
- Preventing operators with a history of insolvency from operating in B.C.
- Ensuring funds for reclamation come from those responsible.

Liability Management

A key component of the Comprehensive Liability Management Plan is making sure industry continues to be solely responsible for all site cleanup costs in B.C. To manage accountability, the Commission is enhancing the Liability Management Rating (LMR) by bringing in additional tools to more closely track and respond to oil and gas liabilities, evaluate financial risk, and ensure there is appropriate funding to mitigate liability risk.

The Commission uses the LMR program to evaluate each company's ability to pay for site restoration. The deemed liability of a well is the estimated cost to decommission and restore the site. The LMR is the ratio of estimated operational assets (deemed assets) and security deposit to estimated decommissioning and restoration liabilities (deemed liabilities) for permit holders.

What that means is we're checking to make sure companies can pay for cleanup BEFORE they get a permit and while they're operating.

Lessons learned through using the LMR program from 2011 to present uncovered the need for adjustments. The program is now enhanced to include stringent criteria in the assessment of liability and risk to evaluate each company's ability to meet its restoration obligations.

Did You Know



- Inactive and abandoned oil and gas sites pose **no financial risk** to the public.
- The Commission holds more than **\$150 million** in security from various oil and gas companies.

Continually Improving How We Monitor Risk

Our goal is fewer orphan-funded insolvencies down the road. That means some operators may be required to provide more security. Our Plan for liability management includes:

- An improved method of estimating liability depending on the site and activity. This includes adjustments to more closely monitor each company's progress in decommissioning and restoring sites.
- Incorporating additional factors that may identify risk, such as how many inactive sites a company has, its compliance history and the remaining life of its assets.
- Developing a risk assessment model for additional oil and gas infrastructure, such as pipelines.
- Developing a set of operational and corporate risk indicators to identify problematic companies. Additional factors include financial health, complex corporate structures, and agents and directors with compliance issues in other industries and jurisdictions.
- Integration of the above into a program that consistently and transparently applies financial assurance requirements for permit holders to mitigate risk to public safety, the environment and the Orphan Site Reclamation Fund.

These enhancements create the foundation for more robust liability management, providing the Commission with the necessary information to make decisions where corporate health or operational risk is evident.

Improving the Rate of Inactive Site Restoration

Another focus of the Plan is to speed up the rate at which inactive sites are returned to their pre-activity state. In May 2019, the Commission implemented the Dormancy Regulation, making B.C. the first province in western Canada to impose in law timelines for the cleanup of oil and gas wells.

B.C. has about 10,000 inactive and abandoned wells under the care and control of viable companies. While many companies are actively restoring sites, the rate of restoration has not kept pace with development. Legislative changes in May 2018 cleared the way for this new regulation, setting timelines and imposing requirements for:

- **Decommissioning**
- **Site Assessment**
- **Remediation**
- **Reclamation/Restoration**
- **Notification**
- **Reporting**

A well site is considered dormant if it does not meet a threshold of activity for five consecutive years (does not produce for at least 720 hours a year). The new regulation aims to give each well site a prescribed timeline to complete restoration.

There are four categories of wells under the new regulation. Type A sites are those that did not meet the activity threshold as of Dec. 31, 2018. Type B sites will meet the threshold between 2019 and 2023. Type C sites will be those sites that meet the threshold after 2024. The Commission may identify some wells as priority sites to be restored on an expedited timeline after considering several factors, such as Indigenous, agricultural and environmental interests.

The new regulation includes backstop timelines by which site restoration must occur. Work on dormant sites will begin immediately. Once fully implemented, at least 10,000 to 11,000 wells will be restored.

Companies with large portfolios of dormant sites may apply for a Liability Reduction Plan, which could allow for some added flexibility on the type and location of sites to be restored.

The regulation requires companies to communicate with First Nations, land owners and local governments about their cleanup work, and report annually to the Commission about their workplans and work completed. Information will be made public.

The dormancy regulation's initial focus is on wells as they represent the largest footprint and liabilities. Timeline requirements for other oil and gas sites will be implemented in the future.

Cleanup on Agricultural Land

Site restoration work on Crown land must meet requirements to redistribute and re-contour surface soils, restore natural drainage and revegetate with suitable species. There are also specific provisions for restoration of oil and gas sites in the Agricultural Land Reserve. Through agreement with the Agricultural Land Commission, we ensure site reclamation work is completed in compliance with requirements to return the land to its pre-activity state.

How We're Addressing Orphan Sites

The Commission addresses concerns about inactive and abandoned oil and gas sites in B.C. that may have no viable operator.

In cases where an oil and gas operator is insolvent or cannot be located, the Commission may designate the operator's sites as orphans. This authority comes from Section 45 of the Oil and Gas Activities Act and allows the process of site cleanup to continue.

Once declared an orphan site, the Commission uses the industry-funded Orphan Site Reclamation Fund (OSRF) to decommission the site and restore it. Currently, the Commission has 346 orphan sites at various stages of restoration, which represents just over one per cent of all oil and gas wells in B.C.

The industry-funded OSRF means B.C. residents will never be on the hook for a single dollar of site cleanup.

What is the Orphan Site Reclamation Fund?

The OSRF is the source of funding for all orphan site restoration, collected through industry levies on a continual basis and adjusted annually to ensure industry always pays, and B.C. residents never pay, for the cleanup of orphan oil and gas sites.



Partnering with Indigenous People

Well restoration work provides an opportunity for the Commission to work hand-in-hand with Indigenous communities most affected by orphan wells.

The Commission has several partnerships and projects underway directly related to orphan site restoration.

These initiatives are:

Creating opportunities

The Commission is piloting a number of trials designed to provide opportunities for collaboration on work objectives and examine the role of traditional knowledge in orphan site restoration work.

Providing orphan partnership projects

- Undertaking joint assessments on candidate orphan sites
- Establishing ecologically suitable reclamation plans for the sites
- First Nations companies/partners undertaking the required surface reclamation work
- First Nations-led monitoring of reclamation outcomes

Delivering Indigenous education programs

The Commission is providing training opportunities for Indigenous people in environmental monitoring certification and land reclamation certification through B.C. universities.





Supporting Land Owners

Land owners have rights to use, work and safeguard the land upon which they live. This includes being assured measures for protecting the soil, water and other resources are respected by those accessing their property. On rare occasions, in the course of developing the petroleum and natural gas resources below their land, an operator may become insolvent or deemed unable to properly manage the site. In these cases, site maintenance, safety and restoration become the Commission's priority.

Land owners are not responsible for managing or maintaining orphan sites. If an orphan site is identified, the Commission contacts the land owner and provides an information package informing them of the restoration process. We ask for any information regarding the state of the site, including erosion and weed control issues. This allows us to work collaboratively as we carry out restoration. Land owners may also request to perform certain work on the site if they have the equipment and experience.

Land owners can apply for compensation for outstanding rental payments or land disturbances in relation to the surface lease of an orphan site on their land. If they wish to apply for compensation, they may submit an application for loss of use of the land while restoration is carried out.



Amount spent by B.C. residents on site cleanup since the establishment of the Orphan Site Reclamation Fund

Funding for the Orphan Site Reclamation Fund

The previous industry-funded OSRF's fixed tax was unable to accommodate the recent increase in orphan liability. That changed when the Commission crafted an OSRF levy assessed on a company's site restoration liability, instead of on the fixed tax on marketable gas and petroleum.

Under this model, the Commission sets the orphan funding required in a given year and charges permit holders a levy. A permit holder's share of the levy is based on their estimated restoration liability divided by the total restoration liability estimated for oil and gas sites in the province.

$$\text{PERMIT HOLDER LIABILITY LEVY} = \frac{\text{PERMIT HOLDER LIABILITY}}{\text{TOTAL LIABILITY}} \times \text{AMOUNT TO BE RAISED BY THE LEVY}$$

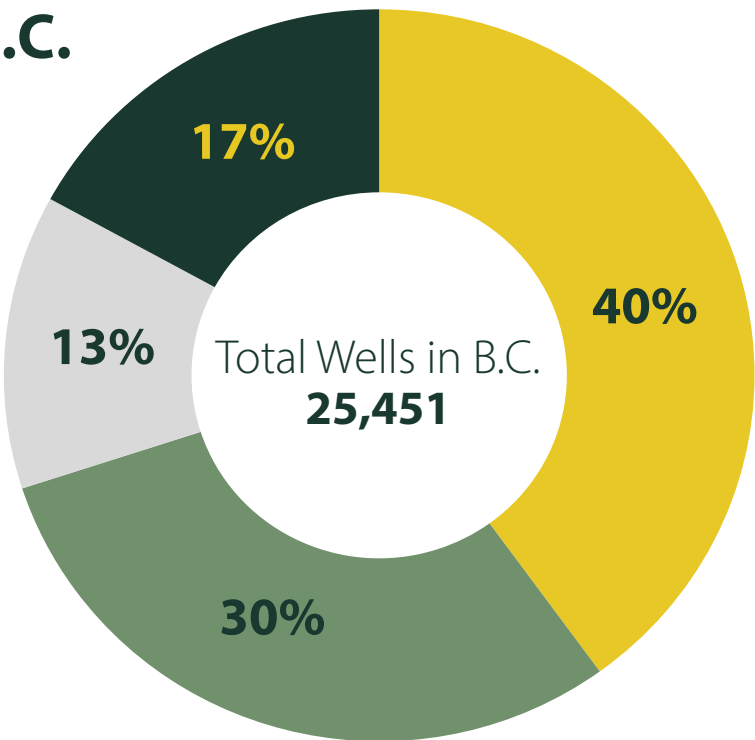
This model is being phased in over three years, using an increased production levy to help transition over to the full liability levy. This approach starts at a 50 per cent liability/50 per cent production levy on April 1, 2019 and shifts by 25 per cent annually until it is a full liability levy in April 2021.

Introducing the new liability levy to fund orphan site restoration maintains the 'industry pays' approach, ensuring no direct cost to B.C. residents.

Well Populations in B.C.

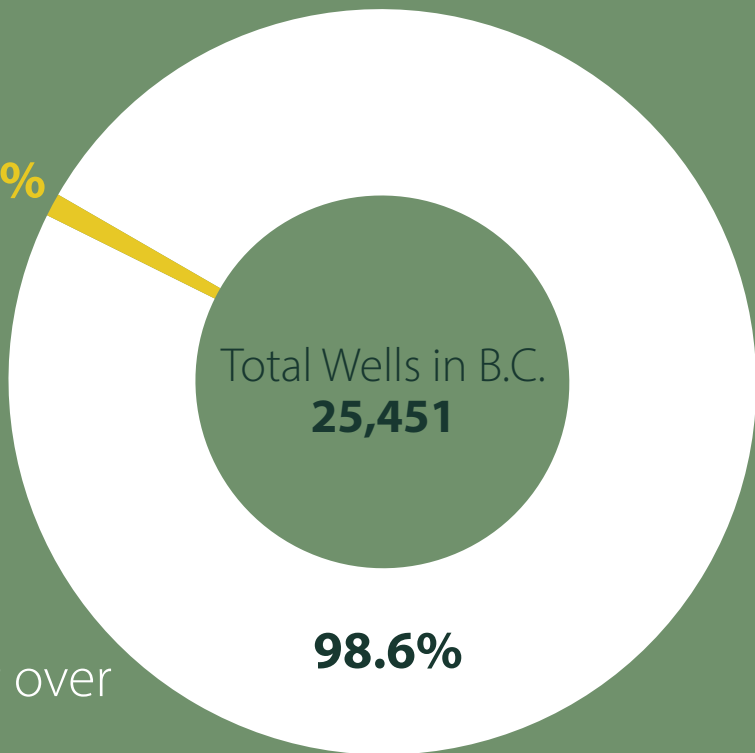
- Active Wells
- Inactive Wells
- Abandoned Wells
- Wells with a Certificate of Restoration

Orphan wells can be in all categories, except Active Wells.
Excludes wells under development.



Orphan Wells in B.C.

- Wells owned by a viable operator
- Orphan wells (346 total)



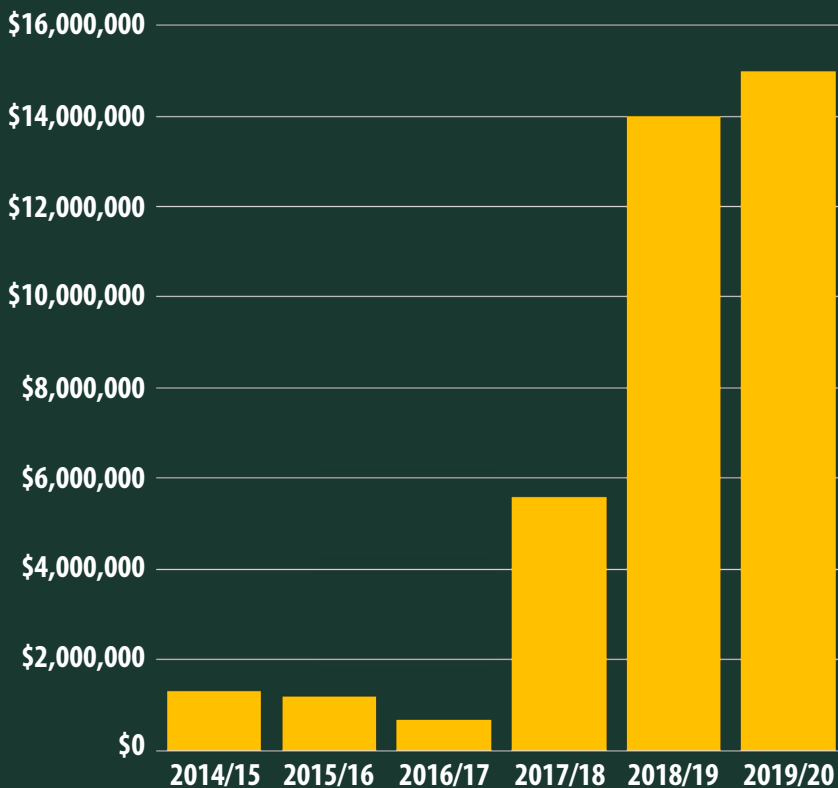
Orphan wells make up just over **one per cent** of all oil and gas wells in British Columbia.

Orphan Site Reclamation Fund Spending

The Commission estimates spending up to \$15 million a year to fully restore designated orphan wells within a 10-year timeline.

OSRF spending has increased three-fold since 2017/18 - at the same time the number of orphan sites increased. The Commission is spending \$15 million for the 2019/20 orphan work plan.

Orphan Site Spending



6. Reclamation
Redistribute soils and revegetate for return to pre-disturbance

4. Site Investigation
Complete investigation of soil and groundwater

2. Well Decommissioning
Permanently plug and cut/cap wellbore

Restoration Process



5. Remediation

Complete remediation of contamination



3. Site Decommissioning

Remove and salvage/dispose of equipment



1. Deactivation

Pig and purge lines and drain equipment

Our Orphan Work Plan

There is a sequential process involved with the treatment of an orphan site. For example, sites must be deactivated and decommissioned before undertaking any significant reclamation work. The closure of orphan sites is a multi-year process where some phases may take place concurrently, such as well abandonment programs on some sites with reclamation programs on other sites. A site that requires all work phases to be completed may take more time than a site only requiring surface reclamation to replace soils and vegetation.

We have a program which ensures we get the resources to support closure and reclamation of all wells and facilities. Within the first year after orphan designation, pipelines are disconnected and purged of fluids and gases so they may be made safe. In addition, any high-priority wells are permanently decommissioned so they do not pose a risk to public safety.

Once sites are made safe, closure work considers the interests of impacted private land owners, the interests of impacted Indigenous communities and restoration goals.



There were **225** total complaints to our Compliance and Enforcement team.



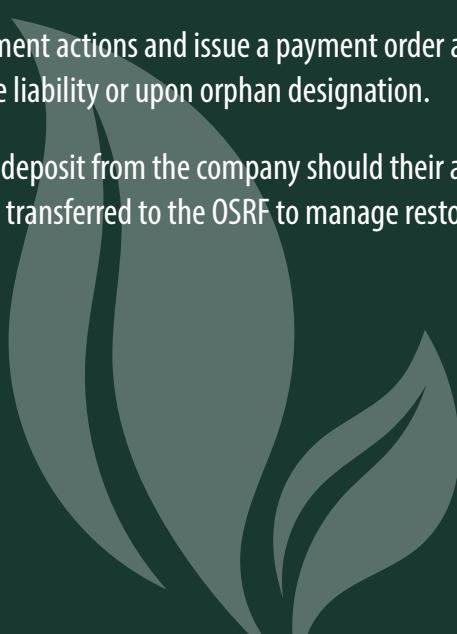
Compliance and Enforcement

The Comprehensive Liability Management Plan relies on rigorous compliance and enforcement checks to ensure success.

Oil and gas activities in B.C. are authorized by way of permits, licences and authorizations issued by the Commission. These permissions let a company know the activities it may carry out and can include specific conditions the Commission considers necessary. The Commission works to ensure permitted oil and gas activities are conducted in compliance with all applicable legislation and regulations.

Compliance is accomplished through proactive monitoring and inspection of activities, and investigation and enforcement of alleged non-compliances. The enforcement process encompasses an array of tools and actions that work to keep activities and operations in compliance with legislation, including the issuance of orders, findings of contravention and execution of administrative penalties.

To ensure compliance for the many aspects of the Comprehensive Liability Management Plan, the Commission has a series of tools, which include:

- An enhanced Liability Management Rating to assist in determining required security deposits for applicants and permit holders. If a permit holder's LMR is below 1.0, or if other factors indicate financial risk is evident, a security deposit is required. LMR reviews are conducted monthly and during asset transfer processes for all permit holders.
 - By law, the Commission considers additional factors such as compliance and operating history for all applicants. In deciding whether to approve permit applications or applications to transfer permits, the Commission considers persons who have influence over the applicant.
 - In the case of an unpaid security deposit, the Commission does not approve an application. Security that is unpaid by a permit holder is debt owed to the Commission and various compliance and enforcement actions are available.
 - The Commission may carry out enforcement actions and issue a payment order and/or take control of oil and gas activities to reduce liability or upon orphan designation.
 - The Commission also holds the security deposit from the company should their assets be designated orphans. This money will be transferred to the OSRF to manage restoration work.
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Next Steps on Liability Management

The Comprehensive Liability Management Plan provides the Commission with a clear path forward to hold industry accountable, address unrestored oil and gas sites, protect public safety and safeguard the environment.

The Commission continues to engage with private land owners, Indigenous communities, government and industry to proactively address any concerns associated with liability management in the province.

This Plan is constantly being adjusted to hold industry accountable, protect public safety and safeguard the environment.

New Orphan Liability Levy – April 2019

Implement Dormancy Regulation – May 2019

Update Liability Model – Summer 2019

Integrate Liability Model and Corporate Health Test into Decision Making – Spring 2020



Published in May 2019 by the
BC Oil and Gas Commission

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A CLEAR PATH FORWARD



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It holds industry accountable, addresses unrestored oil and gas sites, protects public safety and safeguards the environment.

