



Environmental Handbook

# 10 Gears of the E Machine



# Contents

Overview .....	3
Quality, Health & Safety, and Environment ..	4
Compliance .....	5
Water Management .....	6
Soil Management .....	8
Vegetation Management .....	10
Wildlife Management .....	13
Waste Management .....	14
Spill Management .....	16
Chemical Products Management .....	17
Air Quality Management .....	18
Archaeological and Heritage Resources .....	19
Closing Statement .....	20



## Land Acknowledgement

In the spirit of reconciliation, we acknowledge the land we work on is home to Indigenous peoples who lived here long before we began our projects. They are the original keepers of the land. We thank them for sharing it with us.

We commit to responsible land stewardship and working respectfully with communities.

# Overview

The Surerus Murphy Environmental Handbook provides general information on our environmental initiatives and practices. We are dedicated to responsibility and sustainability and have created core principles that outline our environmental efforts to live up to our value of never harm.

Our environmental efforts center around 10 principles named 10 Gears of the E Machine. Each gear exemplifies our commitment to minimize the environmental impact of our activities and to protect the areas in which we operate.



## QUALITY, HEALTH & SAFETY, AND ENVIRONMENT POLICY

Surerus Murphy Joint Venture, working toward its vision of delivering world class infrastructure together, is committed to conducting our business in a manner valuing the principles of never harm, trust, integrity and assured delivery. We recognize the importance of, and are committed to integrating quality, health & safety, and environmental management into our business.



### We will:

- Provide a safe place to work and a culture of openness where never harm is an achievable goal.
- Offer an environment where our workforce goes home safely, and we empower all to exercise their right to refuse unsafe work without fear of retribution or negative consequences.
- Offer an environment that positively supports the physical, psychological, and social well-being of all employees.
- Provide relevant and appropriate instruction, training, and supervision ensuring all employees and contractors understand their responsibilities and have the proper knowledge to perform their duties.
- Deliver positive leadership and engagement in all aspects of what we do.
- Minimize the environmental impact of our activities by protecting the areas in which we operate.
- Respond to and learn from all incidents to prevent reoccurrence.
- Provide timely and relevant information across the organization ensuring transparency in communication.
- Monitor our risks and opportunities; audit and review our process ensuring they remain relevant and beneficial.
- Regularly review our progress and organizational objectives relating to our core values ensuring we continually improve our delivery.
- Maintain our management systems and certifications to COR, ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018.
- Comply with all legislative and regulatory requirements, and other commitments we have made relating to quality, health & safety, and the environment.
- Employ good practice ensuring projects are completed first time, on time, every time.

Every employee and contractor is responsible within their specific role to implement this Policy. The Executive Leadership Team fully supports this policy and shall ensure it is communicated, implemented, and reviewed annually.



**Sean Surerus**  
President, Surerus Pipeline Inc.



**Mick Fitzpatrick**  
President, Surerus Murphy Joint Venture

# 1

## Compliance



Surerus Murphy complies with relevant federal and provincial regulatory bodies. This commitment is a fundamental aspect of our dedication to environmental preservation and the establishment of trust within the communities in which we operate. Operating within the framework of applicable regulatory requirements is a cornerstone of our approach.

- Project works will only begin when the required permits, licences, and approvals are in place.
- Project Site-Specific Environmental Plans (SSEP) identify regulatory requirements related to our projects.
- Environmental legislation, guidelines, and industry best practices are at the forefront of every step of the construction process.
- Some applicable legislation include:
  - **Federal:** Canadian Energy Regulators Act (CERA), Species at Risk Act (SARA), Fisheries Act, Migratory Birds Convention Act (MBCA), Transportation of Dangerous Goods Act (TDGA),
  - **Provincial:** Environmental Protection and Enhancement Act (EPEA), Alberta Public Lands Act, Alberta Pipeline Act, Alberta Water Act, BC Water Act, BC Water Sustainability Act, BC Environmental Management Act.
  - Refer to the Environmental Legislation List document for a comprehensive list of legislation.

# 2

## Water Management



Water is the second most important natural resource after air. Water is sensitive to construction impacts. In our environmental programs, water management and monitoring play a central role and is especially critical in pipeline construction as it pertains to mitigating soil erosion and preventing sediment from entering aquatic environments. Through industry-leading water management strategies, we prioritize the protection of this essential resource, aligning with our commitment to responsible and sustainable construction practices.

- Waterbodies are properly identified and marked in the field before the initiation of ground disturbance to avoid or reduce potential adverse project effects.
- Equipment cleaning precautions are taken to reinforce biosecurity on worksites where whirling disease is potentially present in waterways.



- Comprehensive Equipment/Vehicle Cleaning and Inspection Procedures are followed.
- Water from hydrotesting is re-used (carried forward from one section to another) as much as possible.
- Staff monitor and record the total amount of water used for all construction activities such as dust control, Horizontal Directional Drilling (HDD) support, fire suppression, freeze down, and hydrotest operations.
- Water usage never exceeds the approved usage limit of the water body or flow volume.
- Each watercourse requires a project-specific Watercourse Installation Plan which provides a detailed description of environmental mitigation measures and pipeline construction and equipment crossing methods that will be used.
- Drainage, erosion, and sediment control (DESC) measures are prioritized at all watercourse crossings.
- Dewatering is carefully managed so water is:
  - not moved from one watershed to another,
  - not released into a waterbody,
  - released at a controlled rate to minimize erosion potential,
  - filtered to remove small soil particles,
  - released onto a well-vegetated area for additional particulate filtering.

# 3 Soil Management



Pipeline construction begins and ends with the soil—effective soil management is integral to the reclamation of the right-of-way to its natural conditions. Our careful approach ensures that every step of the construction process sustains the ecological integrity of the soil, contributing to responsible and effective land reclamation.

- Construction methods with minimal surface soil disturbance are implemented for erosion and sediment control and enhanced reclamation success.
- Soil handling procedures are optimized based on soil type, seasonal conditions, and equipment availability.
- Surerus Murphy's drainage, erosion and sediment control (DESC) procedure controls the transport of water and soil on and off the construction work area and protects watercourses from sedimentation events.



- Clean hydrovac slurry can be reused on the project and reintegrated into the subsoil at appropriate locations.
- Three-stage pipeline project clean-up and reclamation:
  - **Step one:** Re-establish the original surface topography and water drainage patterns while returning the subsoil.
  - **Step two:** Allow the soil to settle on the right-of-way, typically after one growing season.
  - **Step three:** The soil is recontoured, the topsoil is replaced, and the land is stabilized.
- Soil stabilization methods include reseeding, revegetation, track packing, rollback, riprap or rock cover, diversion berms, biodegradable matting, and straw wattles.



# 4 Vegetation Management



Surerus Murphy implements vegetation management programs to sustain soil and vegetation. Healthy vegetation acts as a natural protective barrier, preventing soil erosion, maintaining soil fertility, and promoting a stable ecosystem that supports long-term environmental sustainability.

- Maintain conditions that sustain healthy native vegetation and control weed species.
- Implement cleaning procedures for equipment and vehicles so they arrive on the work site clean and free of soil and any debris that could contain weed seeds, non-native vegetation, or noxious weeds. Cleaning precautions include disinfecting equipment on worksite where clubroot is potentially present to reinforce biosecurity. Refer to the Equipment/Vehicle Cleaning and Inspection Procedure for a comprehensive description of the equipment cleaning protocol.
- Restrict the construction footprint to the approved workspace.
- Avoid disturbing sensitive plant communities or rare plants by ensuring they are isolated and marked off.
- Prioritize revegetation around waterbodies and steep slopes to ensure stabilization. Species used in revegetation or reclamation are composed of native seed mix.

A young white bark pine tree stands in a forest. The tree is green with a light-colored trunk. In the foreground, a white sign with a yellow band at the top is attached to two wooden posts. The sign reads "CAUTION WHITE BARK PINE AREA". The background is filled with taller, darker evergreen trees under a clear blue sky.

**CAUTION**

**WHITE BARK PINE  
AREA**



# 5 Wildlife Management



Due to the diverse ecosystems and species surrounding our construction developments, effective wildlife management is crucial. Surerus Murphy's Site-Specific Environmental Plan (SSEP) includes strategic measures to minimize our impact on wildlife and prevent negative interactions. Pipeline installation works are conducted inside the Least Risk Window (LRW), outside of the restricted activity period (RAP) found in the Migratory Birds Convention Act (MBCA), or within a timeframe advised by a wildlife resource specialist.

- All construction activities near fish-bearing watercourses comply with the Fisheries Act and the codes of practice or authorizations.
- Wildlife monitoring tools including wildlife surveys and utilizing observation cards identify key areas for restrictions and special controls.
- Bear Awareness Plans are designed and implemented where required.
- Project leaders communicate the movement of wildlife on construction sites as the occurrences happen.
- Various tools are activated to preserve wildlife habitat, including safeguarding trails, salt licks, identifying Key Wildlife Biodiversity Zones (KWBZ) and using bear-proof containers wherever possible.

# 6 Waste Management



Surerus Murphy minimizes its environmental footprint by reducing natural resource consumption, reusing materials sourced from nature, and minimizing waste generation. As materials and chemicals reach the end of their lifecycle, proper waste segregation becomes crucial to decrease volumes in landfills and waste storage. Our practices aim to benefit both current and future generations by ensuring responsible and eco-friendly construction methods.

- Set-up designated storage areas for hazardous and non-hazardous wastes to minimize the spill potential and enhance waste segregation.
- Integrate waste-reduction strategies to emphasize the principles of reduce, reuse and recycle.
- Collect hazardous waste materials and securely store them to prevent loss of containment and clearly label in accordance with the Site-Specific Environmental Plan (SSEP).



- Proper handling, and disposal of hazardous waste, characterized by being corrosive, flammable, reactive, and/or toxic, includes transportation to licensed receivers and completed documentation.
- Non-hazardous waste, including construction debris and routine commercial trash, follows standard recycling or disposal procedures.
- Uncontaminated hydrovac material will be reintroduced to the natural environment and contaminated hydrovac slurry is properly disposed of as waste.
- Examples of project waste include cardboard, food waste, contaminated soil or water, product containers, spent welding rods, etc.



# 7 Spill Management



Surerus Murphy takes a proactive approach in spill prevention. During construction, we handle toxic substances containing hydrocarbons and other contaminants that may be harmful to the environment. As a result, we must proactively seek mitigations to prevent spills, and if spills occur, respond safely, effectively and within local requirements.

- All sites are equipped with a Spill Response Plan (SRP) which prioritizes spill prevention and provides guidelines for pre-use inspections and secondary containments.
- All staff are encouraged to familiarize themselves with the SRP regardless of their duties.
- Strategies for minimizing/preventing spills are built into project documents including the SSEP, which guide refueling in proximity to water, how to use a refilling hose, automatic shut-off valves, and other activities involving handling hydrocarbons.
- The SRP includes procedures requiring immediate clean-up after discovery (if safe to do so) and reporting to a supervisor.
- Soil or water that is affected by a spill is considered a waste and is managed accordingly.



# 8

## Chemical Products Management



Surerus Murphy sites utilize necessary chemical substances for operational needs. Ensuring the safe, secure, and appropriate management of chemicals is imperative, as improper handling may pose potential risks to both human health and the environment. Mitigations are in place to safeguard against any contact with chemicals, emphasizing our commitment to maintaining a secure and environmentally conscious workplace.

- Hazardous materials are stored, labelled, and handled in compliance with Workplace Hazardous Materials Information System (WHMIS) requirements.
- Oily waste is placed in suitable containers, clearly labelled, and stored in secondary containment.
- Chemical products are organized and secured to ensure compliance with Transportation of Dangerous Goods Regulations (TDGR) and WHMIS.
- Chemical products may be hazardous or harmful and secondary containment may be applicable for storage.
- If a chemical spill occurs, the resulting matrix will constitute a waste and will need to be controlled and managed as a waste substance.



# 9 Air Management



At all Surerus Murphy sites, emissions are vigilantly managed through stringent processes and controls to minimize pollution. Unnecessary idling, a common and preventable pollutant, is addressed to curtail wasted fuel and engine wear, reduce additional greenhouse gas emissions, and limit impacts to nearby communities. Additionally, managing and minimizing dust generated from construction activities is a crucial focus in our comprehensive air quality management approach. By adhering to these measures, we prioritize environmental responsibility, ensuring the preservation of air quality and contributing to sustainable and eco-friendly project practices.

- Surerus Murphy is taking climate action with the aim of reducing our greenhouse gas emissions through incentive-based programming and innovative technologies.
- Programs, including the vehicle idling reduction campaign and the vehicle maintenance program, promote actions to reduce unnecessary idling.
- Visual aids and vehicle monitoring technology are installed on many Surerus Murphy vehicles to remind and reinforce our goal of reduced idling across projects.
- Dust control is a seasonal mitigation required as per the Environmental Protection Plans (EPP).



# 10 Archaeological and Heritage Resources



Archaeology includes items made by or used by humans and the remains of prehistoric animals or plants. Archeological discoveries are possible during trenching projects, and potential artifacts will be treated with care and respect for the discoveries and reported to the appropriate authorities.

- Surerus Murphy works closely with the client and local regulatory bodies to inform them of archeological discoveries and the mitigations implemented.
- Operations in proximity to known archaeological sites are limited to approval by the responsible regulatory agency.
- If known areas of historical, archaeological, or paleontological resources are on or near the work area, the area may be cordoned off to prevent disturbance from construction activities.
- Any work completed near an area where historical, archaeological, or paleontological resources are present will be done under the supervision of a historical, archaeological, or paleontological resource specialist if this is deemed necessary.



## Closing Statement

Surerus Murphy's principles are designed to limit harm to the environment and align with our core value of never harm. When followed, they enable our work to be done responsibly and sustainably. These principles do not take precedence over regulations, legislation, project permits, or contract documents, as it is not a comprehensive list of requirements.

Should you encounter any environmental resources that are not being managed thoroughly throughout the project, please contact the project's environmental lead.

If you have any questions or comments regarding the content of this handbook, please direct them to [QHSE@surerus-murphy.com](mailto:QHSE@surerus-murphy.com) or the project's environmental lead.







