GREAT DIVIDE TRAIL ASSOCIATION SAFETY MANUAL

This manual is an integral part of the GDTA Occupational Health & Safety Management System. Each worker is expected to read relevant sections of the Manual and comply with its requirements. The policies and practices in this manual do not take precedence over Alberta OHS Regulations. Each worker/volunteer should also be familiar with the applicable Alberta OHS Act and Regulations.

This document is based on the Safety Manual of the Greater Bragg Creek Trails Association.

Their work is gratefully acknowledged.

Feb 28, 2023

Table of Contents

Revisions:

Rev. 0

First Issue of Document

Rev. 1

- Added role of Safety Officer
- Completed GDTA HACR (specific to GDTA Activities)
- Revised Tailgate Meeting Checklist

Rev. 2

- Changed references to Crew Leader to Trip Manager/Volunteer Lead
- Provided Roles and Responsibilities for Trip Coordinator
- Provided revision dates for updated SWPs and bolded changes
- Added two new SWPs: 21 - Safe Trailer Towing, 22 – STARS Protocol
- Updated Tailgate Meeting Checklist with feedback recommendations

Rev. 3

- See changes in bold black
- Removed Environmental Philosophy as independent document referenced Appendix 13
- Removed Safety Committee Terms of Reference, independent document referenced Appendix 14
- Site Field Inspection see Section 2.14 and Template added, Appendix 15
- Reference to WorkSafe BC regulations
- Added SWP-23 Working Near or Fording Swift Water
- Updated Appendix 5 Safety Training Certification Matrix

Rev. 4

- See changes in bold black
- Updated First Aid requirements consistent with OH&S Act changes effective March 31, 2023
- Reviewed and updated SWPs (3 yr review)
- Updated Appendix 5 Safety Training Certification Matrix
- Added Camp Safety Section 2.17
- Updated ATV/UTV Form to include training requirement

1.0 Organizational Health and Safety Policy

1.1 Health and Safety Policy and Statement of Commitment

Policy and Commitment

The Great Divide Trail Association (GDTA) is committed to developing and maintaining a strong health and safety program, providing a healthy and safe working environment for our volunteers and contractors, managing the trails system and GDTA property in an environmentally responsible way, and reducing risks to public users of the trails system. Our goal is to have our volunteers and contractors return home every day, healthy and without injury.

In Practice

The GDTA works to

- Clearly demonstrate our commitment to health and safety through responsible leadership and clear communications
- Be compliant with legislation, regulations, and industry standards in relation to planning, operations, and equipment maintenance
- Monitor the health and safety program and practices through continuous feedback from volunteers and review of best practices
- Support volunteers and contractors in developing both awareness and understanding of health and safety issues related to GDTA work activities, encouraging a shared commitment to GDTA health and safety
- Supports the coordination and cooperation of our workers concerning safety on the work site, encouraging safe work and feedback to improve our safety program
- Provide volunteers with appropriate equipment, training, and a health and safety program (HASP) to support a healthy and safe work environment
- Identify, evaluate, and manage the health and safety hazards and risks to which volunteers and contractors may be exposed

All GDTA volunteers are responsible and accountable for our health and safety performance. Complete and active participation by everyone, every day, in every job is necessary for the safety excellence the organization expects.

GREAT DIVIDE TRAIL ASSOCIATION

President Name: _____

(On behalf of the Board of Directors)

President Signature: _____

Date Reviewed and Signed: _____

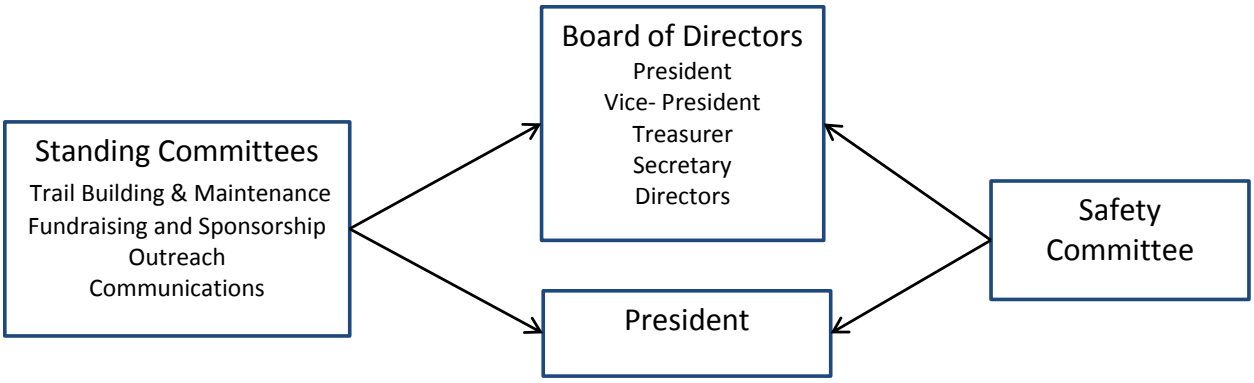
1.2 Environmental Stewardship Policy and Statement of Commitment

Policy and Commitment

The environmental policy and commitment is an independent GDTA document. Its document reference number is POL-00110. It is included as Appendix 13 of this document.

1.3 Rights, Roles and Responsibilities of Stakeholders

The organizational framework of the GDTA is outlined in the chart below.



Occupational Health and Safety Legislation outlines the general responsibilities to support workers in achieving a health and safe work environment. The GDTA Health & Safety Program applies to everyone working as part of the GDTA; all GDTA volunteers and contractors (collectively, "workers") are responsible and accountable for health and safety. All workers are expected to understand roles and responsibilities and must comply with the GDTA Health and Safety Program as detailed in this manual.

All workers have the following ***fundamental rights.***

The Right to Know

All workers have the right to know what hazards may be present at a work site, how these hazards may affect them, and what will be done to control or mitigate the risks associated with these hazards.

The Right and Responsibility to Refuse

All workers have the right to refuse work that they believe on reasonable grounds to be unsafe for themselves or others at the worksite.

Never perform any work process or operate any tool, appliance or equipment that could create an undue hazard to your health and safety of you or any person around you.

If you feel you must refuse to carry out a work process or operate a tool, appliance, or equipment due to lack of training or a feeling of “imminent danger” report this to the lead volunteer immediately.

If you find yourself in an unsafe condition, make yourself safe, and ensure the unsafe condition is remedied as soon as possible.

You must refuse work in which you feel you would put yourself or fellow workers in imminent danger.

Find a trained, qualified co-worker to do the work. The co-worker also has the right to refuse to do the work if it is unsafe.

All GDTA volunteers must work together to keep the work site safe. Tailgate meetings assist in communicating concerns regarding hazards and unsafe conditions and safe work procedures to prevent injury and/or illness. **Continuous communication in the field is essential to ensure changes in hazards are understood and mitigated effectively.**

The Right and Responsibility to Participate

All workers have the right to participate in health and safety management activities.

The Right and Responsibility to Report

All workers have the right to report safety events (i.e. near miss, incident), unsafe practices, and unsafe conditions without fear of reprisal.

While all workers are responsible and accountable within the Health & Safety Program, ***specific responsibilities*** are attributed to different roles within the Association.

1.3.1 Board of Directors

- Ensure the health and safety of workers
- Ensure that workers are aware of OH & S rights and duties
- Ensure that workers are not subjected to or participate in harassment or violence
- Ensure that workers have competent supervision
- Ensure that workers are appropriately trained
- Consult and cooperate with health and safety committee (HSC) to resolve issues in a timely manner
- Cooperate with any person exercising duty under legislation
- Comply with legislation
- Establish and implement a health and safety program
- Ensure that policies, practices, and procedures are developed, reviewed, and maintained to support all workers in carrying out the safety plan
- Makes health and safety program reports, plans, practices available in writing
- Posts or makes readily available minutes of HSC
- Promote a safety culture throughout the Association

1.3.2 Safety Committee (SC)

- Comply with Association safety policies and practices
- Ensure that the Association protocols adhere to Alberta Occupational Health and Safety Act, Regulations, and Code
- Ensure that the Association protocols adhere to Work Safe BC regulations and codes for trail work executed in BC
- Maintain records of activities and meetings
- Manage all safety-related documentation
- Review safety policies and practices on a regular, annual basis and make these available to all workers
- Manage the Trip Manager/Volunteer Lead training process in cooperation with the Trail Building Committee and manage all attendant documentation
- Regularly, on an annual basis, review the leader training with participation from the Trail Building committee and make changes where required
- Manage the incident reporting, investigation and analysis process as outlined in the Safety Manual
- Support trip managers in dealing with unsafe volunteers and contractors
- Receive, consider, and resolve health and safety concerns / complaints
- Participate in hazard identification
- Ensure that Volunteer Lead/ Trip Managers are adequately trained
- Ensure that Volunteer Lead/ Trip Managers have reviewed and understood the Health and Safety Manual and are adequately presenting/informing their work parties via tailgate meetings
- Report all safety events (hazard identifications, near misses, incidents) to the proper authorities
- Identify lessons learned from all safety events, communicate these to the workers, and revise safety policies, practices, if necessary
- Support the correction of unsafe work behavior
- Participate in investigations of serious injuries and incidents (SI) and potential serious incidents (PSI) at the work site
- Ensure responsibilities of various roles are adequate and being portrayed by using “End of trip” surveys for trail volunteer crew to get feedback
- Makes OH&S information readily available to volunteers

1.3.3 Volunteer Leads/Trip Managers

- Ensure that you are competent to supervise workers – see crew lead checklist provided at Trip Manager/ Volunteer Lead training
- Take all reasonable precautions to protect worker health and safety
- Ensure workers act in accordance with requirements of legislation
- Ensure workers use hazard controls and personal protective equipment
- Ensure that workers are not subjected to or participate in harassment or violence
- Advise workers of all known or foreseeable hazards
- Report OH & S concerns to Safety Committee
- Cooperate with any person exercising duty under legislation

- Comply with legislation
- Comply with the Association's Health and Safety Program
- Conduct a pre-job meeting/tailgate for all work groups.
- Provide Volunteer and Tailgate Meeting forms (Complete and signed off) to Safety Committee for Archiving (Audit purpose).
- Ensure that personal protective equipment (PPE) is available, maintained and used where required
- Ensure that equipment is in good working order
- Stop work until identified hazards are controlled or mitigated
- Ensure that paperwork is completed and properly filed
- Provide supervision throughout the work event
- Report all safety events to the Health and Safety Committee
- Conduct a basic investigation into all incidents
- Report near misses (potentially serious incidents – PSI) to HSC
- Make safety suggestions to the Health and Safety Committee
- Inform Maintenance Tools lead if equipment requires servicing or replacement
- **Ensure tools and equipment has been inspected/maintained and ready for service**
- Daily updates with Trip coordinator (InReach or cell if available)

1.3.4 Trip Coordinator

The Trip Coordinator is the interface between the Trip Manager and volunteers for GDTA Trail building trips. In this role the following are a list of roles and responsibilities that specifically relate to safety:

- Working with the Safety committee to ensure that all volunteers are aware of the GDTA Safety Manual, Safe Work Practices and Hazard Assessment and Control of Risk (HACR) and where to access them (link included in Volunteer Package, located on website)
- Address questions from public and volunteers regarding trail building and maintenance trips
- Maintain a trip participant's database, including emergency contact information, allergies, medical issues
- Collecting trip volunteer feedback, personal release forms (hardcopy form or e-survey within two weeks of trip)
- Provide volunteers with trip information including physical requirements and safety expectations, trip location, timing, required gear and clothing, carpooling and driving directions, trip reminders
- Verifying volunteers have safely reached camp and home (Coordination with trip manager)
- Providing logistical support to Trip Manager in the event of health and safety issues, gear and vehicle breakdowns and safety emergencies on trips
- During trips, monitoring weather and fire status
- Daily updates with Trip Manager (via InReach or cell if available)

1.3.5 Volunteer Workers

Volunteer workers include those contributing to trail building and maintenance, trail scouting, trail marking, and other tasks as requested.

- Comply with Association's safety policies and practices
- Adhere to Alberta Occupational Health and Safety Act, Regulations, and Code
- Take reasonable care to protect their own health and safety and the health and safety of others at the work site (i.e. Do not feel pressured to conduct unsafe practices or use equipment they are not familiar with)
- Cooperate with Directors, Committee Leads, Trip Manager/ Volunteer Lead or others to protect their health and safety
- Use safety devices and wear PPE, as required
- Report health and safety concerns, including perceived hazards, near misses, incidents, and/or unsafe work behaviors to trip manager
- Cooperate with any person exercising duty under legislation
- Comply with legislation
- Review equipment and PPE for wear and tear, defects, issues prior to use, tag or dispose of defective PPE
- Notify Trip Manager upon arrival home for accountability

1.3.6 Contractors

- Ensure the work site and work processes under their control do not endanger health and safety
- Advise the Association (as Prime Contractor) of the names of employees or self-employed persons working under their direction
- Cooperate with any person exercising duty under legislation
- Comply with legislation

1.3.7 Safety Officer

- Ensure overall health of the trip volunteers is being maintained
- Support Tail Gate meeting talk regarding safety issues and carry first aid kit in field
- Visible safety role and contact person for safety in the field
- Administer standard first aid as required to trail volunteers
- Support Trip Manager/ Volunteer Lead by managing the safety role for crew volunteers in the field
- Rove all field locations at least once per day to ensure work is carried out safely
- Support any incident reporting/documentation in the field

1.4 Safety and Environment Committee Terms of Reference

The Safety and Environment Committee Terms of Reference, TOR-0050 defines the mandate, term and responsibilities for this standing committee of the GDTA. It is included as Appendix 14 of this document for volunteer reference in the field.

1.5 Applicable Legislation

The Health and Safety Program has been developed in accordance with

- Industry codes of practice
- OH & S Act, Regulations, and Guidelines
- OHS Legislated Requirements, specifically Industry Code 02100 (Landscaping) and Industry Code 02200 (Right-of-Way Maintenance) and OHSA Bulletin relative to Volunteer Status under the OHSA (LI022) (Appendix E)
- Bill 30
- Work Safe BC Occupational Health and Safety Regulation

2.0 Safety Plan

2.1 Introduction

Purpose: The Safety Plan outlines and provides guidelines to implement an effective HSE program for the Great Divide Trail Association (GDTA).

Scope: This Safety Plan applies to all work and activities conducted by the Great Divide Trail Association in all locations that work is executed.

Users: The users of this document are: Volunteers, Contractors, Consultants, Suppliers working with and for the GDTA.

See Roles and Responsibilities in Section 1.3 above.

The GDTA Safety Plan has been developed in accordance with:

- GDTA policies and Terms of Reference
- Alberta OHSA 18001 Health and Safety Management System Standard
- Industry codes of practice

Relevant occupational health and safety legislation will be made available to all personnel. Links to relevant reference materials will be provided to all Trip Managers/ volunteer leads. Volunteer packages and hard copies will be placed in the Maintenance Tools Storage Trailers.

Any questions or concerns regarding the GDTA HSE Program can be directed to a worker's immediate trip manager, the GDTA Safety Committee Lead, the GDTA Board of Directors and/or President.

2.2 SAFETY COMMITTEE:

The Safety Committee is comprised of 2-3 volunteers chaired by a member of the Trail Building and Maintenance Committee. It reports to both the President and Board of Directors. See Section 1.4 for Safety Committee Terms of Reference and Section 1.3.2 for Safety Committee Roles and Responsibilities.

Meetings

- Safety Committee meetings will be held as required during the year to review safety related topics.
- They will hold emergency meetings to discuss near misses, volunteers conducting unsafe work practices with previous warnings or incidents that require adjustments to our safety program.
- They will meet annually to review and update safety manual.
- All committee activities are summarized for the Board of Directors prior to each Board meeting.

2.3 Organizational Rules

Rules Enforcement

The GDTA will ensure that all volunteers receive adequate training for the activity that they are working on (i.e. rules, regulations, and practices). Volunteers will be informed of the enforcement policy prior to commencement of their volunteer work and the volunteer leader will handle violations in an objective, but firm manner.

The Association supports the following disciplinary regime:

1st Offence = Verbal Warning

2nd Offence = Written Warning

3rd Offence = Removal of volunteer privileges

There is no appeal process. A meeting may be held with BOD members and safety committee to determine disciplinary action, if required.

Impairment: Possession or use on the job of intoxicating beverages or unauthorized drugs is strictly forbidden and constitutes grounds for dismissal from the work site. See Attachment 2 for GDTA Volunteer Warning Template.

2.4 Health & Safety Policy and Practice

The HSE Policy and Practice document guides the non-profit corporation in establishing GDTA's objectives and commitment regarding health, safety, and environment. This document is approved by the GDTA Board of Directors. This is conducted annually. An up-to-date copy will be provided to all members of the GDTA upon request, and will be posted in the Maintenance Tool Trailer, for reference during field work. Safe Work Practices will be available in hard copy a site location for trail maintenance for reference purposes.

See Section 1.1 and 1.2 for Health and Safety and Environmental policy Statements.

2.5 Safe Work Practices (SWPs)

2.5.1 SWP Management Policy

Everyone wants to get the job done ***"right"***. A major part of getting the job done ***"right"*** is also getting it done safely. Getting the job done safely means that the people involved follow safe work practices. Every worker must share a goal to maintain a safe and healthy work environment. Rules must be followed to prevent work-related incidents, injuries, and illnesses. Hazard assessments assist in identifying hazards and controlling them. Following safe-work practices is mandatory. Maintaining equipment, as well as, properly labeling and storing hazardous materials. Never perform any job in which you have not been trained in or feel "imminent danger" completing.

Safe work practices (SWP) are ways of controlling hazards and doing jobs with a minimum of risk to people and property. To control, reduce, and mitigate risk, we have a set of safe work practices. These have been developed to fit the association needs. The GDTA understands and fully endorse these safe work practices, and ensure that:

- SWPs are developed with participation from representative workers
- SWPS are approved by the Safety Committee
- SWPs are reviewed every three years as a minimum SWPs are updated as required (i.e. in response to new information, review of safety events such as hazard identifications, near misses, and/or incidents)
- SWPs are provided in hard copy at the work site (Safety Binder)
- SWPs are available for review and reference for each crew/worker
- all workers understand the SWPs that apply to them
- all equipment and management required to support SWP compliance are available
- lead volunteers ensure that all safe work practices are followed

2.5.2 SWP Definition

Safe work practices are documents which are focused on specific tasks, intended to assist in identification of hazards and the appropriate controls considered necessary to reduce the workers' exposure to health and safety risks. The SWP provides guidelines on the "dos and don'ts" of how to perform a specific task. One job may include several SWPs. Crew leads must discuss any relevant hazards with workers and must identify SWPs that are applicable to the intended job. Workers must read, understand, and follow SWPs that are relevant to the work that they will be carrying out.

If an applicable SWP does not exist for a specific task, then a ***hazard assessment*** must be completed using the Safety Tailgate Meeting form. The need to develop a new SWP may be due to a regulatory/legislative change, the addition of a new task, conducting a familiar task in a new environment (thereby introducing new hazards and risks), and/or an accident or near miss in an area that is not currently covered by an SWP.

The implementation of safe work practices is a key-way of mitigating hazards and managing risk to people and property. Although many such practices are standardized, they may be adapted to the needs of the organization within the constraints of acceptable safety. The GDTA endorses safe work practices that are codified, well communicated, enforced, and supported by all levels of the organization. The SWPs have been developed for all tasks that are typical within the GDTA trails system workplace. Alberta Construction Safety Association SWPs have been used where applicable as the basis for the GDTA SWPs.

2.5.3 Process and Schedule of SWPs

At the start of each day of work the crew leader is to conduct a worksite "tailgate" meeting focusing on the hazards that might be encountered during the work tasks. Active workers participation is a part of this process. Everyone needs to feel their concerns have been addressed.

If significant changes occur to the worksite environment or the nature of the work changes, the crew leader is to conduct a worksite meeting focusing on the hazards that have been introduced to the worksite.

The Trip Manager/ Volunteer Lead is responsible to ensure that all crew members are aware of the SWPs required for the work being undertaken.

Volunteers are expected to report unsafe work practices to the Volunteer Leader, the Committee Lead, or the Board as appropriate.

All workers are encouraged to identify improvements, desired changes, and/or the need for new information. These suggestions should be communicated promptly to the Trip Manager/Volunteer Leader (crew lead), the Safety Committee Lead, and the Board. Individuals with experience and expertise in the specific area should research industry standards and best practices, determine how these are best applied within the GDTA, and develop a new SWP. The draft SWP can then be reviewed and, when accepted, included in the GDTA Safety Plan.

The existing SWPs should be reviewed on a regular basis, minimally once every three years and preferably annually. If an incident occurs, any SWP that relates to the job should be reviewed by the involved worker(s), the Crew Lead, and the Health and Safety Committee. If it is evident based on this review that there are limitations in the SWP, the SWP should be revised to incorporate lessons learned from the incident.

2.5.4 List of Current Safe Work Practices (SWPs)

1. Safe Manual Lifting
2. Boosting Batteries
3. Safe Driving
4. Changing Vehicle Tires
5. Securing Vehicle Loads
6. Fueling Gasoline Engines and Slip Tanks
7. Safe Loading of Small Equipment
8. Vehicle Extraction & Winching
9. Portable Power & Hand Tools
10. Preventing Heat Stress
11. Using Stepstools & Ladders
12. Using a Gas Weed Brush saw
13. Animal Encounters
14. Severe Weather
15. Working around Mobile Equipment
16. Working Alone in the Trails System
17. Working in Cold Environments
18. Using a Chainsaw
19. Using Cleaning Solvents & Other Flammables

20. ATV Use
21. Trailer Towing
22. STARS Protocol
23. Working Near or Fording Swift Water

All current GDTA SWPs are available as printed copies in the Safety Binder at camp location and in the Tool Maintenance Trailer. See Appendix 1 for individual SWPs. **SWPs are located on the GDTA website with a link included in the Volunteer Package for review by Volunteers prior to a Trail Building Trip.**

2.6 Hazard Assessment and Control

Hazard Assessments are performed to identify hazards associated with specific work done by workers, to bring attention to safety needs and to focus on the prevention of incidents. Hazards for specific tasks range in severity. Controls are implemented to eliminate or minimize these hazards.

All volunteers, equipment operators, construction personnel (workers), contractors and volunteers have a major role in identifying and controlling these hazards.

Fewer injuries and illnesses, increased productivity, reduced costs associated with incidents, and increases in health and safety awareness are some direct results of a hazard assessment program.

It is very important to recognize that the hazard assessment does not deal strictly with things that are wrong at the present time. Rather, these assessments must deal with what could go wrong. When examining the areas and the process that combines these items to produce results, keep asking the question “What if?” The knowledge and experience of the people conducting the assessment are of vital importance in this step.

Risk management protocols, such as the ones identified throughout this manual, go a long way toward mitigating possible hazards. Nonetheless, on-site hazard assessment and management are crucial to preventing injury or damage due to unexpected or unpredictable circumstances.

2.6.1 Critical Task Inventory

A critical task inventory is a collection of specific work activities that are provided from each work group. The inventory identifies health and safety hazards, providing an evaluation of severity of risk. The critical task inventory is maintained by the GDTA Safety Committee and is part of the HSE Program.

The Hazard Assessment and Control Report (HACR) Scoring Guide is included in Appendix 3. The HACRs for Trail Maintenance and Bridge Construction for the Great Divide Trail Association is attached to this Safety Manual (Appendix 3).

2.6.2 Critical Risk Controls

Critical risks are those which have the greatest likelihood of causing recurring incidents, serious injuries, and/or fatalities. A goal of the HSE Program is to reduce or eliminate these effects through the control

of these critical risks. These controls are outlined in the SWPs, the Health, Safety and Environment guidelines, and the Critical Task Inventory. The most critical risks have been identified based on the nature of the GDTA activities, review of industry standards, and will be updated in future based on review of GDTA incidents/near misses and volunteer feedback.

Each task identified in the Critical Task Inventory is color-coded to indicate severity of risk: highest risk is coded RED, moderate risk is coded YELLOW, and low risk is coded GREEN. The latter are those risks which are not life-threatening, but which frequently occur as part of typical GDTA operations. The Critical Task Inventory and Risk Control Forms have been developed as part of the HSE Program and included in Appendix 3. This is reviewed annually by the GDTA Safety Committee. Completed safety forms are filed and act as a record of how the GDTA is implementing and consistently operationalizing the HSE Program.

Although these forms are reviewed annually, if it is evident that modification is needed to improve the relevance and utility of the forms, this should be communicated to the Safety Committee for consideration. Any formal modification/revision of the forms will be communicated to all workers/teams through written documentation.

The safety forms and all health and safety records should be clearly marked/identified, legible, accessible to relevant personnel, and appropriately maintained.

2.6.3 Tailgate Meeting Hazard Assessment

Before any work at the work site begins, an initial hazard assessment is conducted. A team approach that includes crew lead and the affected workers achieves the best results. In certain situations, site drawings and proposed schedules, Critical Task Inventory and Risk Controls and SWPs are key tools for identifying potential health and/or safety hazards, evaluating them, and for making recommendations for corrective actions.

Proper hazard assessment requires volunteers and workers to

- Maintain a safety context whenever they are acting on behalf of the Association
- Ask oneself if tools and/or equipment are being operated safely
- Ask oneself if tools and/or equipment are in a place that likely won't endanger others
- Make workers aware of job scope and the potential hazards involved in executing task
- Be aware of their level of fatigue and modify the pace or job as necessary
- Factor temperature and potential weather changes into the length of day

2.6.4 On-site Hazard Mitigation

If hazards are properly assessed, then steps can be taken to mitigate them. Risk management protocols anticipate many potential hazards, but volunteers and workers must expect the unexpected and be ready to respond.

Ways in which hazards may be mitigated include:

- Follow SWPs and safety protocols
- Stop your and others' activities that appear unsafe to discuss what is going on
- Move tools that are in unsafe locations to better spots
- Raise concerns to the group about changing or dangerous weather conditions

2.6.5 Safety Tailgate Meetings

DAILY TAILGATE MEETINGS:

- Prior starting work each day, tailgate meetings following an established template will occur to review tasks, identify hazards, and ensure that all workers are prepared to safely undertake the tasks of the day. Ensure trip manager/volunteer lead reviews hazard/incident reporting process.
- All workers must sign the "Tailgate" form to indicate that have understood and completed preparation for a safe workday.

Topics for the Tailgate Meeting include:

Overview / Introductions

1. Round table introductions
2. Overview of project / planned activities
3. Where – what trail we are working on (show on map)
4. What – what is the task
5. When – hours for the day
6. OH&S expectations
    a. Form Signoff
    b. Worker's rights and responsibilities
    c. Hazard reporting
    d. Emergency response plan

Logistics

7. Weather forecast
8. Food & Water
9. Clothing – based on current conditions & forecast, PPE required
10. Insect Repellent
11. Washrooms

Basic Safety

12. First Aid Kit (ask who is trained- assigned Safety Officer)
13. Satellite Telephone
14. Wildlife Safety don't run / group together – bear spray

15. Trail Hazards
16. Allergies & Injuries
17. Specific safety equipment and/or considerations based on the planned tasks
18. Identify location for emergency contact numbers and procedure for an emergency
19. Ensure volunteers with specific needs [diabetes, severe allergies, epi-pens, etc.] have a buddy to keep watch on them and communicate their needs to the trail crew leader
20. **Field Muster Point**

Tool Safety

21. Circle of Death (Safe Distance)
22. Hazard Identification and risk minimization for Planned Activities
23. Carrying of tools
24. Eyes wide open – expect the unexpected
25. Before anything overhead comes down ensure everyone around you knows (Protocol for announcing, i.e. "Heads Up!")

Organize Groups & Handout Tools

26. Review Equipment – get volunteers to pick tools suitable to their ability
27. Organize Groups and assign tasks

See Tailgate Meeting Form in Appendix 11.

2.6.6 Trail Building and Maintenance Activities

1. **Trail Maintenance**
    a. Core volunteers/workers
    b. Working with power tools – trail brushing
2. **Bridge Construction**
    a. Specialized crew - Working to set plans
3. **Mechanized travel**
    a. Refueling machinery
    b. Delivering tools and supplies
    c. Efficient travel to distant trail construction sites
4. **Chainsaw work**
    a. Specialized crew requiring certification
    b. Trail clearing
    c. Hazardous condition reduction (leaners, blow down, rotted trees)
    d. Branch trimming
5. **Reconnaissance and route finding**
    a. Scouting new trails or re-routes
    b. Annual maintenance review and monitoring of conditions
6. **Contractor hiring and monitoring**
    a. Drainage work (trenching, sloping, culverts)

b. Tree felling

7. **Map and Signage Installation**
    a. Installation of metal or wooden posts
    b. Repair of broken signage/posts
    c. Install maps, signage, and trail blazes
8. **Facility Maintenance**
    a. Maintenance Tool Trailers
9. **Equipment/Vehicle Maintenance**
    a. Hand Tools
    b. Power Tools including chainsaws
    c. PPE
    d. Vehicles (Quad, Trailer)
    e. Safety equipment (First Aid Kits, Fire Extinguishers, PPE)
10. **Administration**
    a. TFA applications
        i. New construction work
        ii. Maintenance work
    b. Vehicle registrations and insurance updated
    c. Ensure all documentation is with vehicles and crews
    d. Emergency contact lists
    e. Equipment rentals (satellite phones, quads/trailers as required)
    f. Review of Safety Plan, HACR, Crew Training
    g. Review Certifications
    h. Monitor/maintain Tailgate Forms & Incident Reports
    i. Communications with local Emergency Response groups

2.7 Personal Protective Equipment (PPE)

2.7.1 Policy on PPE Use

All PPE used by the GDTA will be within the requirements of O. H. & S. regulations and CSA standards. All PPE provided by the GDTA will be maintained in accordance with manufacturer's instructions and requirements.

PPE provided by the GDTA includes:

- Safety Glasses
- Hard hats with shield and earmuffs (for chain saw, brushing and support)
- Chaps/chainsaw resistant pants (chain saw)
- Hearing Protection (ear plugs for workers)

2.7.2 List of PPE to be Used

- All volunteers shall wear safety glasses during work. This includes all field work, camp set-up, camp take-down, but does not include being at camp before or after work.
- All volunteers will wear boots or sturdy shoes with no open toes, and any other specialty PPE required for the work being performed.

- CSA approved hard hats shall be worn on the job by all personnel where overhead danger exists.
- CSA approved work boots are to be worn when operating chain saws. Sturdy hiking boots with no open toes are minimally required for trail day volunteers
- CSA approved hearing protection is to be used when operating powered equipment with a noise level in excess of 85 dB
- Clothing shall be appropriate to duties being performed. Long pants and shirt, preferably long-sleeved, and sturdy shoes (no open toes) are the minimum requirements.
- Safety glasses, goggles or face shields shall be worn when metal chipping, chainsaw work, welding, grinding and for other operations where eye protection is required.
- All volunteers operating chainsaws must carry current GDTA approved chain saw certification and wear CSA approved hardhats with earmuffs, face shields, gloves, long sleeved tops, long pants, non-damaged chainsaw pants and CSA approved work boots.
- **All volunteers doing bridge construction near or over fast moving water shall wear a CSA approved whitewater kayak helmet and fall arrest harness.**
- **All volunteers riding in the UTV/ATV shall wear a CSA approved helmet.**

2.7.3 Process for Use, Care, and Maintenance of PPE

- GDTA issued PPE will be inspected at time of issue and before each use by the volunteer using the PPE.
- All PPE that is of questionable reliability, damaged, or in need of service or repair will be replaced immediately.
- All PPE that has been removed from service will be tagged “OUT OF SERVICE”. Any PPE tagged “OUT OF SERVICE” will not be returned to service until repaired and inspected by a qualified person.
  No piece of PPE will be modified or changed contrary to manufacturer’s instructions or specifications or O. H. & S. Regulations.6.4

2.8 Preventative Maintenance

All tools, vehicles and equipment should be properly maintained to reduce risk of injuries to volunteers or damage to property.

Workers should regularly check all tools, vehicles, and equipment that they are working with, and shall take out of service any tools, vehicles or equipment that poses a hazard due to a need for repair.

2.9 Training

2.9.1 Policy and Training Session Guidelines

Policy Statement: See GDTA policy for Safety Training.

Key points:

1. GDTA committed to ongoing training to support its Safe Work Practices (SWPs)

2. SWPS are living documents – to be reviewed on a minimum 3-year basis. Volunteer input for improvements to SWPs are encouraged.
3. All volunteers and workers are expected to be familiar and comfortable with the work they are asked to do – SWPs are available for review prior to work, hazards are discussed.
4. Volunteers are responsible to initiate actions that will remedy any unsafe conditions
5. Volunteers are required to respond to the emergency response plan when called to do so.
6. Volunteers are responsible for their PPE for a given task and are expected to comply.
7. Any volunteer has the right to refuse unsafe work or work they do not feel qualified to do.

Training Sessions:

The GDTA has two levels of volunteers and workers: Trip Managers/Volunteer Leads and Volunteers. They all require an understanding of the Safety Manual and OH&S Requirements however Trip Managers/ Volunteer Leads require a Safety Training Orientation (Session or self-study) and must acknowledge that they understand it. They are:

1. Volunteers Leads including: **President, Trip Coordinator** and Trail Building Committee Chair
2. Trip Managers

Trip Managers/ Volunteer Leads are responsible to make volunteer workers aware of their roles and responsibilities as part of the Tailgate Meeting prior to any work activities.

TRIP MANAGERS/ VOLUNTEER LEADS:

- Must undergo a Safety Training Orientation*.
- Must provide proof of certifications/licensing for activities that are relevant to their jobs. (Chainsaw Course, **Operation of an ATV/UTV**, First Aid Certifications, Tree felling…)
- Training records for the above courses will be maintained by GDTA and documented in the Training Matrix (See Appendix 5)

VOLUNTEERS:

- Given the limited exposure that these volunteers have with the organization these volunteers as exposed to the least hazardous jobs. These are typically volunteer trail day volunteers.
- Training will be in the form of “Tailgate Meetings” (See form) where tasks are demonstrated, worker competency is evaluated, and hazards discussed.
- **Safe Work Practices are referenced in Volunteer Package for review prior to trail building trip. Hard copy available at camp.**

CONTRACTORS:

- All contractors hired by the GDTA will have their Safety Performance critically reviewed, and WCB history reviewed as applicable, as part of the Bid Selection Process. (WCB History to be provided from Contractor on request)
- When working with GDTA crews, contractors must participate in daily Safety Tailgate Meetings.

Administration/Oversight:

- All meetings and training activities will be documented, signed by participants and stored in an active documents binder that accompanies the Safety Binder for field work. Scanned signed meeting records, activities and Training Matrix will be stored in the GDTA Safety committee electronic folders.

*Safety Manual Training orientation outline:

- Health and Safety Policies
- Roles and Responsibilities
- Relevant Legislation
- Emergency Response Plan
- Hazard/Incident/Illness/Near Miss Reporting Procedures
- PPE
- Rules and Consequences
- Signatures
- Date

2.9.2 Worker Safety Orientation Outline

Volunteer Trail Workers

At all pre-work meetings, volunteer trail workers receive training and orientation on the safe use of tools, wildlife safety, location of emergency contacts and first aid kits as well as the need to wear appropriate clothing, carry sufficient food and hydration for the day. They are also made aware of their responsibility to assess and monitor their own safety and report any unsafe work practices to the Trip Manager.

All volunteer trail workers using chain saws must hold current and valid certification through an accredited trainer. They are expected to understand the limits of their training and not undertake complex felling or clearing that is beyond the scope of their training.

Trip Manager/ Volunteer Leads

Trip Manager / Volunteer Leads are trained in the following areas:

- How to provide safety orientations (pre-work meetings) to volunteer trail workers
- The GDTA's communication and emergency protocols outlined in Section 2.11.

- Use of ATV's/UTV requires having **a one day Safety Training and** an ATV**/UTV** form signed off by the ATV**/UTV** operator and the GDTA Trip Manager
- Valid First Aid Certification or a Safety Officer on the trip with these qualifications
- Proper management of all documentation including Safety Tailgate Meeting Forms, Safe Work Practices (Appendix 1) and Incident Reporting/Investigation procedures.

Contractors

Contractors are expected to hold all the training and qualifications required for the safe and effective accomplishment of their work. No contractors are hired without proof of their qualifications or WCB coverage.

2.9.3 First Aid and CPR Training

GDTA follows the requirements for numbers and types of first aiders and equipment, as detailed in the OHSA and noted in Section 2.11.3.2 of this manual.

2.10 Investigations

2.10.1 Policy

An incident is any unplanned or unwanted event which results in damage or injury or which could have resulted in damage or injury. Almost every incident is the result of a combination of causes. The primary purpose of investigation is to identify these causes so that corrective action can be taken to prevent a recurrence of the incident.

The GDTA leaders in charge of the area and/or personnel involved are responsible for completion of an incident report and conducting a basic investigation. Volunteers may assist in the investigation under the strict guidance of the leader. Committee leads must review every incident report to ensure that appropriate corrective actions take place. The GDTA will collaborate with all other agencies charged with conducting their own investigations.

Incident reporting and investigation is governed under the Alberta O.H & S Act Section 40 (Report: Time, Place, Nature of injury) and WorkSafe BC Bill 23 Incident Investigations.

It is the policy of the GDTA to have all incidents that result in injury or property damage, or that could have resulted in serious injury or property damage, thoroughly investigated.

1. Any injury that results in a volunteer worker being admitted to hospital needs to be immediately reported to Alberta Labor or WorkSafe BC for work conducted in Alberta or BC respectively.
2. GDTA shall report any “near misses” for potentially serious incidents to Alberta Labor **or** WorkSafe BC for work conducted in Alberta or BC respectively.

The purpose of such investigation shall be to determine the causes of the incident so that appropriate action can be taken to prevent recurrence.

The GDTA shall be responsible for conducting investigations to determine cause, recommended corrective action, and prepare a report.

Once an investigation has been conducted and report completed, the GDTA shall determine and implement appropriate measures to prevent recurrence.

See Appendix 8 for the GDTA Incident Report Form

2.10.3 Investigation Guidelines

Secure the Scene

- Inspect the scene for any hazards that could cause more damage or another incident.
- Take steps to preserve the evidence by keeping everyone away from the immediate area so the scene remains undisturbed; cordon off the area with whatever you have on hand, preferably high visibility tape.

- Identify and make a list of all witnesses as they may not be around when you are conducting the investigation.

Collecting the Facts

- Keep an open mind. If you think you already know what happened and why, you might overlook something important in your investigation.
- Facts should be separated from "opinions or conjecture". Record what people actually saw or experienced, not what someone "thinks" happened, or what someone else "said" happened.
- Consider all possible causes. Making notes of ideas as they occur is a good practice, but do not draw conclusions until all the information is gathered.

Record Physical Evidence

Some physical evidence is subject to rapid change and should be recorded first. Examine and record by notes and/or photos:

- Positions of injured workers
- Location of relevant items
- Weather, lightning
- Condition of equipment used
- Condition of materials used
- Presence or absence of safety equipment or devices
- Presence or absence of appropriate equipment safety guards
- Product information including the names of MSDS (Material Safety Data Sheets) of any substances involved (DA, are MSDS sheets provided for our common items such as fuel, oil, degreasers, wood preservatives, etc.)
- Pattern of debris
- Measurement of critical distances (location of injury or damage relative to exact work spot, trail, other volunteers); make a sketch if possible
- Latitude/longitude or text description of incident site

Record Eyewitness Accounts

Witnesses may be your primary source of information. Witnesses include injured or ill workers, nearby workers, pre-shift workers or supervisors, and any workers in the area at the time.

Prepare a list of your questions prior to starting the interviews. Interview witnesses, as soon as possible, after the incident. If witnesses discuss the event with one another, their own perceptions can become skewed. Witnesses should be interviewed alone, rather than in a group. You may decide to interview witnesses at the scene where it is easier to find out where each person was during the incident and get a description of the events. Alternatively, you may want to do it in a quiet location with fewer distractions. The option you choose will depend of the nature of the incident and the mental state of the witnesses. The crew lead may obtain the support of another volunteer to support the "question process" if they are too closely involved in the incident to address it themselves.

Do's and Don'ts of Interviewing

Do:

- Put the witness at ease.
- Advise them that you will be taking notes.
- Emphasize the real reason for the investigation: to determine what happened and why.
- Let the witness talk – listen carefully.
- Ask the interview questions that are simple and to the point.
- Ask the person to explain what happened or what they know about the possible causes of the event.
- Confirm that you have the statement correct.
- Try to sense any underlying feelings of the witness.
- Make careful notes during the interview.
- Let the witness review your notes, initial each statement and date it.
- Thank each witness.
-

Don't:

- Intimidate the witness.
- Interrupt.
- Prompt.
- Ask leading questions
- Show your emotions.

Complete the Report

Before completing the report, ensure that each diagram, drawing and photo is correctly labelled and catalogued. Fill out the incident report form (Appendix 7) to the best of your ability. The form will provide the basis for an analysis of the incident and allow the Association to take the appropriate corrective measures if required. Submit the completed form to your Safety Committee Chair or a member of the Board if the Safety chair is not available.

Analyze the Incident

To determine whether and what action, if any, the Association needs to take, the incident must be analyzed to determine why it happened and what were the root causes. Things to consider include:

- What were the decisions that led up to the incident?
- Were there regulation or rule violations?
- What was the nature of the supervision?
- Was training adequate?
- Were standard operating procedures followed?
- Were any changes in design, products or work procedures introduced before the incident?
- Were outside influences involved?

Make Recommendations

As part of the report, make recommendations on how you believe future incidents of this nature may be avoided. The GDTA Safety Committee will review the report and the recommendations to determine if any changes need to be implemented.

2.11 Emergency Preparedness

2.11.1 Policy

The GDTA is committed to developing and maintaining a system whereby it can respond efficiently and safely to internal emergencies while waiting for outside assistance. We are also committed to providing assistance to responding agencies in whatever capacity our volunteers are comfortable performing.

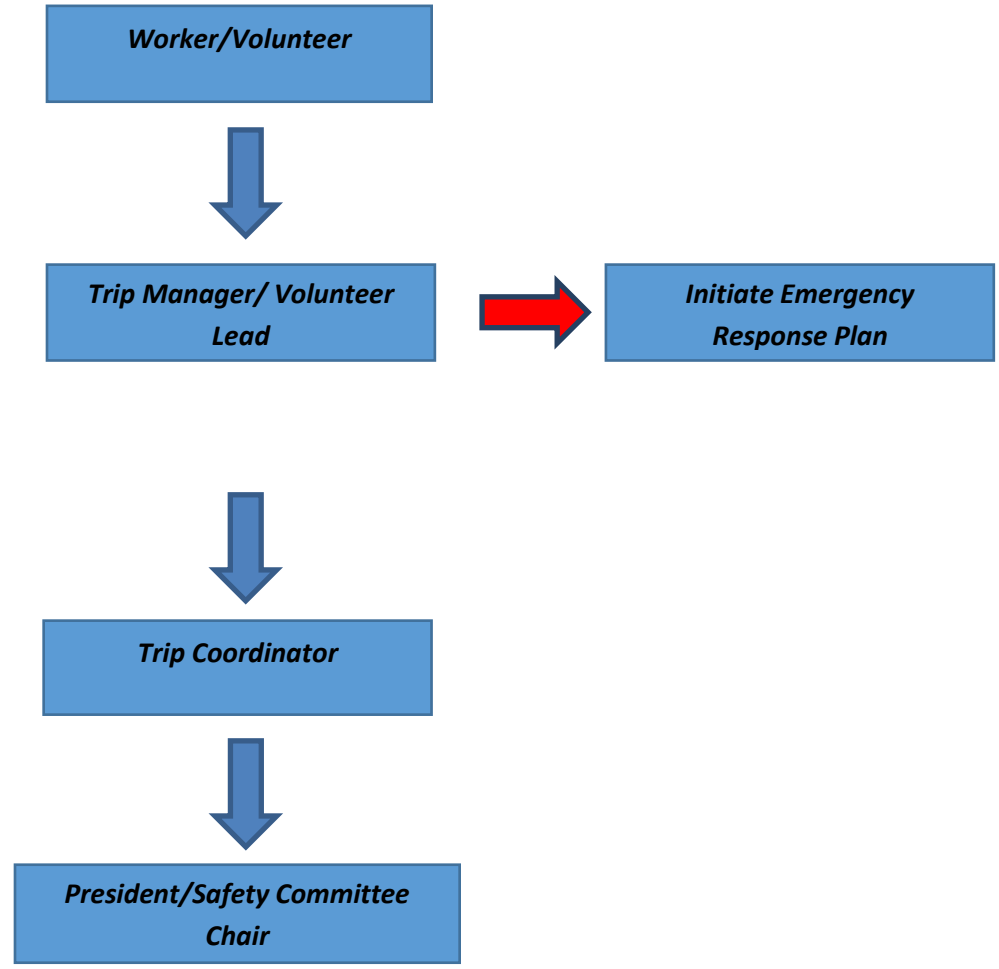
Emergencies are defined as unexpected events or conditions that require intervention to reduce injury, death, or property damage.

Emergencies that have been identified as possibilities within the GDTA Scope of Activities include:

- Fire response and protection
- Medical events requiring first aid and/ or evacuation)
- Vehicle accidents
- Power tools related accidents
- Weather related emergencies (Heat/Cold/Storms)
- Wildlife related emergencies

2.11.2 Emergency Response Protocol

To report an incident, follow this reporting protocol:



Incident gravity will determine need to contact RCMP and/or Provincial OHS Investigators

- ***Serious injury is defined as any injury requiring hospitalization***
- ***If telephone contact cannot be made in the reporting chain, then use e-mail to ensure timely communication/documentation between all parties***

Important Contacts List

GDTA contact numbers for the President and Safety Committee Chair are included in the Emergency Response Plan for each Trip, see attached Appendix 12. These are included in first aid kits in the field and with the satellite phone in camp.

Trip Manager / Volunteer Lead

The Trip Manager/ Volunteer Leads have a list of all trip participants' phone numbers and emergency contact names/phone numbers. A list of emergency contacts is maintained by the Trip Coordinator in an accessible location for emergency purposes also.

2.11.3 Emergency Response Plan

1. Sound the alarm using a horn, whistle, or voice.
2. Start evacuation of non-essential personnel and public to pre-determined Muster Point.
3. Quickly determine whether emergency can be dealt with safely by on-site workers. If not, and if evacuation of casualty is required, initiate **Emergency Evacuation Plan**. This is found in Appendix 12.
4. Remove casualties to safe area and render First Aid.
5. Ensure that all persons are accounted for.
6. If rapid evacuation is required such as in the case of wildfire, weather event or wildlife conflict, initiate Emergency Evacuation Plan.

   During the satellite phone call to Emergency Dispatch or STARS, provide the following information:

a. Nature of the accident or injury; avoid using victim's name
b. Type of assistance needed, if any (ambulance or helicopter)
c. Location of accident or injury, best access route into the work site (road name/number), identifiable ground/air landmarks, GPS coordinates (if available)
d. Contact person
e. Local hazards to ground vehicles or aviation
f. Weather conditions (wind speed & direction; visibility; temperature)
g. Topography
h. Number of persons to be transported
i. Estimated weight of passengers for air evacuation.

2.11.3.1 Fire Response and Protection Requirements

The GDTA will conduct activities in compliance with the Alberta *Forest and Prairie Protection Act* and *Regulations.*

2.11.3.2 Muster Points

A muster point shall be designated in camp for emergency response purposes. It shall be signed "Muster Point", the alarm sound to muster identified and communicated to all volunteers in the Volunteer Orientation Session.

An emergency response drill shall be held once during each Trail building trip. The response (# people) and time for all to muster shall be recorded on the Safety Audit sheet.

2.11.3.3 First Aid

GDTA follows the First Aid requirements as identified in Alberta's Occupational Health and Safety Code, Schedule 2, Part 11. **Effective March 31, 2023 this meets the Canadian CSA Z1210-17 Standard, "First Aid Training for the Workplace".**

For reference, the GDTA Small Standard First Aid Kits (Type 2) **2-25 workers must meet or exceed the CSA standard:**

Type 2 Kit Contents:
25 - Adhesive Bandages, Assorted Sizes:[5 - Fabric Adhesive Bandages - 2.5 x 7.6cm (1" x 3"),
10 - Plastic Adhesive Bandages - 1.25 x 7.6cm (3/4" x 3"),
2 - Fabric Fingertip Adhesive Bandages,
2 - Fabric Knuckle Adhesive Bandages,
1 - Fabric Patch Adhesive Bandages - 5.1 x 7.6cm (2" x 3"),
5 – Junior Bandages]
12 – Gauze Pads, Sterile, 12 Ply – 7.6cm x 7.6cm (3" x 3")
1 – Abdominal/Combine Pads – 12.7 x 22.9cm (5" x 9")
1 – Conforming Stretch Gauze Bandage, 5.1cm x 1.8m (2" x 2yd)
1 – Conforming Stretch Gauze Bandage, 7.6cm x 1.8m (3" x 2yd)
2 – Compress Pressure Bandage with Gauze Ties, Sterile – 10.2 x 10.2cm (4" x 4")
2 – Triangular Bandage – 102 x 102 x 142cm (40" x 40" x 56")
1 – Adhesive Tape – 2.5 cm x 2.3m (1" x 2.5yd)
25 – Benzalkonium Chloride Antiseptic Towelettes
6 – Antibiotic Ointment, Single Use
6 – Hand Cleansing Moist Towelettes
1 – CPR Mask with One Way Valve
4 – Vinyl Medical Examination Gloves, L, pairs
1 – Biohazard Waste Disposal Bag
1 – Paramedic Scissors, Stainless Steel, 15.25cm (6")
1 – Forceps, Stainless Steel, Fine Point – 11.4cm (4.5")
1 – Mylar Emergency Rescue Blanket, 132 x 213cm (52" x 84")

Other recommended items include: Benedryl, Immodium

For reference, the Small CSA Type 3 Intermediate first aid kit is required for workplaces with 2-25 workers per shift at any given time working in a high risk environment must meet or exceed CSA Z1220 -2017 workplace first aid kit requirements.

Kit Contents:

25 - Adhesive Bandages, Assorted Sizes: [5 - Fabric Adhesive Bandages - 2.5 x 7.6cm (1" x 3"),
10 - Plastic Adhesive Bandages - 1.25 x 7.6cm (3/4" x 3"),
2 - Fabric Fingertip Adhesive Bandages,
2 - Fabric Knuckle Adhesive Bandages,
1 - Fabric Patch Adhesive Bandages - 5.1 x 7.6cm (2" x 3"),
5 - Junior Bandages]
12 - Gauze Pads, Sterile, 12 Ply - 7.6 x 7.6cm (3" x 3")
6 - Gauze Pads, Sterile, 12 Ply - 10.2 x 10.2cm (4" x 4")
4 - Non Adherent Pads, Sterile - 5.1 x 7.6cm (2"x 3")
1 - Abdominal/Combine Pads - 12.7 x 22.9cm (5" x 9")
1 - Conforming Stretch Gauze Bandage, 5.1cm x 1.8m (2" x 2yd)
1 - Conforming Stretch Gauze Bandage, 7.6cm x 1.8m (3" x 2yd)
1 - Compress Pressure Bandage with Gauze Ties, Sterile - 10.2 x 10.2cm (4" x 4")
1 - Compress Pressure Bandage with Gauze Ties, Sterile - 15.2 x 15.2cm (6" x 6")
2 - Triangular Bandage - 102 x 102 x 142cm (40" x 40" x 56")
1 - Arterial Tourniquet, Windlass Style
1 - Adhesive Tape - 2.5 cm x 2.3m (1" x 2.5yd)
1 - Elastic Wrap Bandages - 7.6 cm x 4.5m (3" x 5yd)
2 - Eye Pad Dressing, Sterile
2 - Eye Shield, Plastic, with Elastic Strap
1 - Instant Cold Compress - 10.2 x 12.7 cm (4" x 5")
25 - Benzalkonium Chloride Antiseptic Towelettes
6 - Antibiotic Ointment, Single Use
6 - Hand Cleansing Moist Towelettes
10 - Glucose Tablets
1 - CPR Mask with One Way Valve
4 - Vinyl Medical Examination Gloves, L, pairs
2 - Biohazard Waste Disposal Bag
1 - Paramedic Scissors, Stainless Steel, 15.25cm (6")
1 - Forceps, Stainless Steel, Fine Point - 11.4cm (4.5")
1 - Padded Malleable Splint - 10.8 x 61cm (4.25" x 24")
1 - Mylar Emergency Rescue Blanket, 132 x 213cm (52" x 84")

See Alberta OH&S Code Schedule 2 for first aid requirements for low, medium and high hazard work. Refer to the Hazard Assessment and Control Record (HACR) in Appendix 3 to determine risk level. First aid requirements depend on # of people working, proximity of work to emergency services and the risk level of work.

A CSA Small Type 2 First Aid Kit is required GDTA **Low to Medium level** risk Field Work:

- Greater than 40 minutes from Emergency Services,
- 2-25 workers.

A CSA Small Type 3 First Aid Kit is required for GDTA **high level** risk field work:

- Greater than 40 minutes from Emergency Services,
- 2 – 25 workers.

2.11.3.4 Emergency Equipment Locations

The iridium satellite phone(s) will be with the Trail Crew(s). If there are chain sawing activities in plan, the sat phone will be with the chain saw crew. Each Trail Crew may have 1-2, 2-way radios for communication with other crew members or camp.

First Aid kits will be with the Trail Crew(s), carried by the designated Safety Officer.

2.12 Training

2.12.1 Worker / Volunteer Safety Training and Involvement

The GDTA encourages all workers to be actively involved in our safety program through the following activities:

- Tailgate safety meetings: adding hazards and mitigation methods
- Volunteer Feedback for SWPs, hazard reporting, **Maintenance Trip Feedback**
- Vehicle operation (Valid license type)
- First Aid Training (**Intermediate**, **Advanced**, Wilderness)
- Specialized training for equipment (ex. Chainsaws, **ATV/UTV**)

2.12.2 Training Requirements & Orientations

First Aid training requirements are in accordance with the Alberta Occupational Health and Safety Code, Part 11 and WorkSafe BC Occupational Health and Safety Regulation, Section 3.15 “First Aid Attendant Qualifications”.

As a minimum, the President, Trip Coordinator, Trip Managers and Volunteer Leads will receive an orientation to the GDTA Safety Manual. Particular attention will be given to hazard awareness, reporting, and mitigation. Daily trail maintenance activities will involve a tailgate talk that discusses hazards that could be encountered and how to mitigate those hazards. Daily checks of equipment and vehicles are intended to reduce the risk of accidents or injuries. Regular checks of safety, first aid, and PPE will ensure that they are always in good condition.

2.12.3 List of Trained First Aiders

This list is kept up to date in the Training Matrix, found in Appendix 5. Volunteers with **CSA Z1210-17 Intermediate First Aid Certification** shall be designated as the Safety Officer for trips. **Intermediate first aid** is the minimum requirement for Medium and High Hazard work executed by the GDTA under OH&S Section 11. Higher level or wilderness first aid training is beneficial but not required by OH&S or WorkSafe BC legislation**. Volunteers with current Standard First Aid training do not need to re-certify with a CSA Z1210-17 training until their current certification expires.**

2.13 Contractor Management

The purpose of Contractor Management is to ensure that safety plans and potential hazards are being communicated between GDTA volunteers/workers and the contractor that we hire. The GDTA also insists that consultants have a recognized internal safety program. This includes any consultants that are hired for engineering work, surveying, and biological studies.

Contractors will be actively involved in GDTA Tailgate Meetings whenever GDTA workers assist or direct contractors at worksites. Details of the work taking place and any hazards or concerns are brought to the attention of all parties involved and they must be effectively controlled. The contractor will make sure that procedures on working around heavy equipment are clearly communicated and proper PPE is in place.

2.14 Site Safety Inspections

GDT trail building and maintenance is a seasonal activity that extends from June to September. Trail crews of two to twenty complete scouting, trail and bridge building and trail maintenance in this period in remote locations. Training, tailgate meetings, volunteer feedback forms and peer support all help to instill a safety culture so that all volunteers return home safely at the end of a trip. To ensure that safety is put into practice and to demonstrate if improvements can be made in the GDTA safety program, a safety audit will be completed on each GDT trip by an experienced volunteer, independent of the Trip Manager or Safety Officer. The audit follows a template of questions that will be filled out, input solicited from trip volunteers and signed off by the designate.

The hard copy of the safety audit will be maintained with trip forms and electronically archived with safety records at the end of the season and maintained for 3 year duration. Input from the safety audit will be used to assess safety program effectiveness and provide insights for areas to improve. A copy of the Safety Audit Template is included in Appendix 16.

2.15 Records, Forms and Statistics

Records for the following items are required by the Safety Committee:

- Completed Safety Tailgate Meeting forms
- GDTA Training Matrix
- Training Certifications
- Incident and Near Misses Reports
- Volunteer Member Input for updates of Safety Manual, SWPs and Forms
- Safety Committee Reports
- End of Trip Surveys

Records shall be maintained as scanned electronic copies stored in GDTA System. Hard copies of Tailgate Meeting Forms shall be maintained in a Hard Copy binder or container at the Trail Camp for the duration of the work.

Statistics will be summarized in the Safety Committee Report prepared annually after field work/trail building and maintenance is completed.

A hard copy binder of SWPs shall be available in the tool maintenance trailer at the camp for trail crews to access.

2.16 Respectful Workplace Policy

The GDTA complies with the Alberta government Respectful Workplace Policy. An excerpt from it is attached to this Safety Manual, as Appendix 13.

2.17 Camp Safety

2.17.1 Camp Layout

Before Trip Leaders and their group set up camp, they need to consider the following health-related factors:

- Location of the camp

- Location of food storage
- Location of water supply
- Location of fuel storage
- Location of tool and equipment storage
- Arrangement of camp facilities (Latrine, First Aid, Cooking, Eating, Sleeping, etc.)

2.17.2 Cooking

Each volunteer is required to have their own cooking gear, pots, pans, utensils, dish cleaning towels, etc. The GDTA will supply the two large stoves, a barbeque, and propane fuel for communal use but volunteers should also bring a small backpacking type of stove and fuel for their personal use.

Each volunteer will be instructed and expected to:

- Set-up and use stoves only in designated cooking areas.
- Ensure personal stoves are in good working condition.
- Ensure personal stoves and fuel sources are stored safely and appropriately.
- Follow the manufacturer's instructions for their stove.
- Ensure stove is set-up on a flat, sturdy surface and attached properly to its fuel source.
- Take precautions while lighting the stove.
- Ensure fuel bottles and canisters stay away from campfires and other heat sources.
- Ensure lit stoves don't go unattended.
- Clean the cooking area they are using immediately after use.

NOTE: For self-supported and walking trips there will be no large stoves or barbeques provided by GDTA.

2.17.3 Fuel Storage

To ensure the safety of all GDTA members and volunteers, and the surrounding environment, all fuel canisters/containers that are not in used should be removed from packs and stored in a designated area that is cool and shaded, and prevents fuel canisters/containers from being dropped, kicked and/or damaged.

2.17.4 Food Storage

An electric fence will be provided for food storage. Everyone will be expected to bring a hard-sided cooler or hard-sided dry food storage container. Each person's hard-sided storage containers will be labelled (please do this at home) and placed in separate designated areas of the fenced compound.

2.17.5 Latrine

A communal, weather-protected latrine will be available. It will be up to individuals to clean and sanitize before and after each use. Personal PPE must be worn when sanitizing the latrine. Cleaner, disinfectant, hand sanitizer and paper towels will be supplied, and everyone will be shown proper disinfecting procedure. If a volunteer feels more comfortable with their own latrine, this will be allowed. They must be prepared to dig their cat hole a minimum of 20 cm deep, 100 metres from the camp and 200 metres from water.

2.17.6 Water

A communal water station will be provided for both filtered drinking water and unfiltered cooking/washing water. Spray cleaner, disinfectant and paper towels will be supplied to maintain and ensure the cleanliness of the area.

2.17.7 Camp Fire

The Safety Officer will work with the Trip Leader and Volunteers to ensure campfires are built in a way that does not endanger anyone or the surrounding forest. GDTA Members will enjoy safe campfires by following these guidelines:

- Keep up to date on fire bans in the area.
- Consider wind speed and direction, ensuring sparks and embers are managed safely.
- Ensure campfires are built in designated areas, on safe surfaces, with all precautions taken to prevent spread.
- Ensure a clearance of 2 to 3.5 metres is maintained between the campfire and other camp structures.
- Ensure all combustible materials, including flammable liquids, propane cylinders, stove fuel, etc. are kept away from the campfire.
- Ensure campfires are kept to a manageable size and are never left unattended.
- Ensure there is water available to extinguish an ”out of control” fire and that the campfire is properly extinguished with water after use.

In the event a wildfire is spotted and/or started by members of the GDTA, the following steps should be taken:

- Notify the Trip Leader and/or the Safety Officer of the fire
- Ensure all GDTA members, and members of the public, are aware and in a safe place
- Notify authorities of the fire ASAP– in Alberta, call 310-FIRE. In BC, call 1 800 663-5555 (*5555 from a cell phone)

2.17.8 Leaving Camp

While Volunteers are allowed and encouraged to explore the areas around camp when they're not working, they are asked to communicate the following information to the Trip Leader and/or Safety Officer before they leave:

- Intention to leave and area to be visited (direction of travel, particular trail in the area, etc.)
- Who they will be travelling with
- When they expect to return to camp

Anyone leaving camp alone on foot shall carry personal safety equipment with them (bear spray, communication device)

Appendix 1 Safe Work Practices

SAFE WORK PRACTICE 1 - SAFE MANUAL LIFTING

SWP Purpose

Lifting heavy items is part of trail crew daily duties. Doing so properly is important to prevent injuries. This safe work practice (SWP) is intended to help workers in assessing the hazards of manual lifting – including lifting, lowering, pushing, pulling, and/or carrying a load. This will involve an evaluation of the load itself, the environment in which the task is being conducted, and the physical capabilities of the worker(s).

Scope

This SWP applies to any worker who conducts the following:

- Lifting, carrying, and/or moving material or equipment
- Transporting, placing, or storing material or equipment
- Removing material or equipment from storage area

Responsibilities

Responsibilities apply to the Trip Manager/Volunteer Lead, all workers, and the Health and Safety Committee.

It is the responsibility of the **Trip Manager**/Volunteer Lead to

- Be familiar with the signs and symptoms of Musculoskeletal Injuries.
- Communicate to workers the importance of early reporting of symptoms and injury
- Consider the option to purchase tools and equipment that may reduce risk to the worker(s)
- Reinforce to workers that any recommended controls must be applied consistently
- Ensure that workers are trained in the requirements of this practice
- Require that this SWP be implemented for all applicable job tasks

It is the responsibility of the Workers to

- Be aware of potential hazards that may be encountered while conducting work that requires manual lifting
- Know the proper use and limitations of equipment.
- Be aware of and comply with requirements communicated in this SWP
- Be familiar with manufacturer's instructions.
- Inspect equipment and work areas regularly for hazards
- Ensure recommended controls are implemented and used appropriately.
- Immediately report any discomfort associated with manual lifting and handling to the Crew Lead.

It is the responsibility of the Health Safety Committee to

- Maintain this Safe Work Practice
- Perform periodic audits to assess that these requirements/SWP are being acted upon.
- Reinforce that recommended controls are to be implemented and used appropriately.

Hazards

Hazards relative to manual lifting and handling may be due to the load's size, weight, shape, joining of more than one item, slippery **or uneven**

surfaces, missing handles/handholds, lack of balance.

The task itself may introduce hazards due to the need for repetitive actions, actions occurring over a long time period, distances involved in moving the load, ergonomic issues.

The environment may introduce hazards due to temperature, humidity, poor lighting, time limits, general physical conditions.

The worker may introduce hazards due to general health, strength, reach, flexibility, pre-existing physical conditions, psychological factors such as stress, lack of familiarity with process, actions, or materials being handled.

Controls

Controls may include elimination/substitution, engineering, warnings, administrative, and/or PPE.

Manual handling tasks should be either originally designed or adapted to be within the worker's capacity.

- Assess the item you will be lifting, lowering, pushing, pulling, carrying, or handling – observe the weight, size, and shape of the item(s)
- Plan ahead – consider how many times it needs to be moved and where it is to be moved.
- Split the load into sections, to reduce the weight so that it can be easily handled by a single worker (The load for a single person should never exceed 50lb (23kg); loads greater than this should be divided between people or carried by more than one person
- If there are two workers moving one item, be sure to continually communicate with one another during the lifting/moving process.
- Use mechanical means
- Use lifting devices such as hoists, ramps, dollies, etc.
- Push loads rather than pull them
- Do not overload the material being pushed (e.g. wheelbarrows)
- Make sure that the load doesn't block vision
- Make sure that the work temperature is appropriate
- When working in hot temperatures, take frequent breaks and stay hydrated

- When working in cold temperatures, wear good, insulated clothing and check that the loads can be handled when wearing heavy gloves/heavy clothing
- Clear obstacles
- Check grade
- Stretch before you lift/handle materials
- Face the object with your feet shoulder width apart
- Keep the load close to the body.
- Bend at the knees and position the body into a squat.
- Secure your hands around the item to be moved.
- Once you have a good grip on the load, keep your eyes up to monitor your surroundings.
- Gently begin raising upwards with your knees, never your back.
- Maintain the curve in your lower back (lumbar curve).
- Continue until completely erect. Never twist. Then turn to the direction required
- Do not lift an object that will obscure your vision or footing.
- Lift the object smoothly and slowly using your leg muscles; do not jerk as you lift.
- Make sure that your path is clear of obstructions and that there are no slip hazards.
- Repeat the same practice in placing the item down, bending at the knees and never twisting.
- If you have a lot of lifting to do, get help, or try not to do it all at once.
- Do not rush or cut corners.
- Try to avoid carrying a load more than 3.0 m without getting help
- Clearly communicate to partner(s) when the load is to be dropped. Example: "All clear? (Confirmed). Drop on count of 3. Ready? 1,2,3 drop."

Training

Workers who are involved in manual lifting/handling should be made aware of signs of musculoskeletal injuries, the methods for safe lifting and carrying. “On the job” training and demos are an excellent way of training.

Resources, References, Definitions

Revision History

Revision	Date	Description of Change	Personnel Involved
REV 0	Feb 2020	New SWP	D Yanchula
Rev 1	Feb 2023	Reviewed – No change	D Yanchula

SAFE WORK PRACTICE 2 – BOOSTING BATTERIES

SWP Purpose

Improper battery boosting can lead to serious injury if done improperly. Batteries commonly explode when improperly boosted, leading to risks to workers through possible acid burns and injuries from flying objects. Boosting batteries properly is important to prevent injuries.

This safe work practice (SWP) is intended to help workers in assessing the hazards of boosting batteries.

Scope

This SWP applies to any worker who conducts the following:

- Boosting battery in vehicle

Responsibilities

Responsibilities apply to the **Trip Manager**/Volunteer Lead, all workers, and the Health and Safety Committee.

It is the responsibility of the **Trip Manager**/Volunteer Lead to

- Be familiar with the task process.
- Communicate to workers the possible hazards when/if done incorrectly.
- Consider the option to seek assistance if unfamiliar with the process.
- Reinforce to workers that any recommended controls must be applied consistently
- Ensure that workers are trained in the requirements of this practice
- Require that this SWP be implemented for all applicable job tasks

It is the responsibility of the Workers to

- Be aware of potential hazards that may be encountered while boosting a battery
- Know the proper use and limitations of the equipment (e.g. booster cables, chargers)
- Be aware of and comply with requirements communicated in this SWP
- Be familiar with manufacturer's instructions.
- Inspect equipment and work areas regularly for hazards
- Ensure recommended controls are implemented and used appropriately.
- Immediately report any incident, near miss, or hazard identification associated with battery boosting to the Crew Lead.

It is the responsibility of the Safety Committee to

- Maintain this Safe Work Practice
- Perform periodic audits to assess that these requirements/SWP are being acted upon.
- Reinforce that recommended controls are to be implemented and used appropriately.

Hazards

Hazards relative to battery boosting include explosions due to improper process, which can expose worker(s) to risk of acid burns and injuries from flying objects.

The task itself may introduce hazards due to exposure to battery acid and electrical current. Sparks from clamps touching one another can introduce a fire hazard.

The environment may introduce hazards due to extreme cold, reducing dexterity, or darkness if conducted at night.

The worker may introduce hazards due to lack of familiarity with the task, psychological factors such as stress.

Controls

Controls may include elimination/substitution, engineering, warnings, administrative, and/or PPE.

- Always wear safety glasses when boosting a battery.
- Always wear gloves when boosting a battery.
- Drive the running vehicle with the active battery up close to the vehicle with the dead battery; this can be done with the vehicles side-to-side or hood-to-hood.
- Make sure the vehicles are close enough to one another so that the cables will reach easily.
- Make sure that the hoods are propped open properly.
- Set the parking brake on both vehicles**. Turn off both cars while making cable connections.**
- Examine the cables to ensure that they are complete and in good repair. Identify the red clamp and the black clamp.
- Never touch the ends to each other at any time.
- Take one end of the cables and attach them to the battery which is usually up front near the corner of the car when the hood is popped up.
- Be sure to correctly observe and identify the positive and negative posts on each of the two batteries: the positive post is usually bigger, has more wires going to it, is frequently red, and has a + sign beside the post.
- Clamp the red end of the cable to the positive post on the battery of the running vehicle.
- Next clamp the black end of the booster cable to the negative post on the battery of the running vehicle.
- Follow the exact same procedure as above on the “dead” battery, attaching first the red positive clamp to the positive post, and the black negative clamp attach to a grounded piece of sheet metal of the vehicle (read comments below). Always ensure that the red positive clamp is attached first, then the black negative clamp.
- Turn on the ‘working’ vehicle to provide the charge, then try starting the ‘dead battery’ vehicle. If it doesn’t start right away, you may need to let the running vehicle run for a minute or two to charge the dead battery, then try starting the dead vehicle again.
- If the “dead” battery does not charge and start the vehicle, double check that the clamps are correctly and firmly positioned.

- Once the “dead” vehicle has started and is running, be sure to keep it running so it recharges the battery adequately.
- When certain that the “dead” battery vehicle has received an adequate charge to keep it running, carefully remove the cables from each vehicle, one vehicle at a time.
- First remove the black negative clamp, then the red positive clamp.
- Hold the detached clamps in one hand away from the other end while removing the second booster cable end from the second vehicle. Again, do not allow the clamps to touch one another.
- Once the cables have been removed from both vehicles, wind them up and put them away neatly.

Training

Workers who are involved in boosting batteries should be made familiar with the process of doing this safely. “On the job” training and demos are an excellent way of training.

Resources, References, Definitions

Revision History

Revision	Date	Description of Change	Personnel Involved
REV 0	Feb -2020	New SWP	D Yanchula
REV 1	Apr 2020	Turn off both cars while connecting cables	D Hockey, D Borthwick, D Yanchula, J Gruttz, J Bateson
Rev 2	Feb 2023	Reviewed – Updated typos in “Purpose”	D Yanchula

SAFE WORK PRACTICE 3 – SAFE DRIVING

SWP Purpose

Driving to and from a worksite is something that is done so frequently that there is tendency towards complacency in how we do this. However, there are serious risks to the vehicle operator and passengers, as well as the public, if due care is not taken. Driving is typically one of the most hazardous tasks performed by workers. This safe work practice (SWP) is intended to help workers in assessing the hazards of driving. This will involve an evaluation of the vehicle, road conditions, driver behavior, and behavior of other drivers. Workers are expected to complete pre-use vehicle inspections and to drive with due care and without distraction.

Scope

This SWP applies to any worker who is a driver or passenger in a vehicle being driven to/from a worksite. Drivers are expected to comply with local traffic laws/regulations. Workers must not drive under the influence of drugs/alcohol; drive while disqualified or not correctly licensed and/or insured.

Responsibilities

Responsibilities apply to the **Trip Manager**/Volunteer Lead, all workers, and the Health and Safety Committee.

It is the responsibility of the **Trip Manager**/Volunteer Lead to

- Communicate to workers the importance of good and safe driving habits.
- Remind workers of traffic laws and good practice.
- Reinforce to workers that any recommended controls must be applied consistently
- Ensure that workers who are driving vehicles have a valid license for the type of vehicle and appropriate insurance for the vehicle.
- Require that this SWP be implemented for all applicable job tasks

It is the responsibility of the Workers to

- Maintain a valid license and vehicle insurance
- Communicate any limitations on their license (e.g. no driving at night, driving standard/manual transmission vehicles, use of medications that cause drowsiness, etc.).
- Know the proper use and limitations of the vehicle.
- Be aware of and comply with requirements communicated in this SWP and with the law.
- Inspect the vehicle regularly and maintain it in good working order
- Complete and document a pre-use vehicle inspection regularly
- Ensure recommended controls are implemented and used appropriately.
- Immediately report any infractions occurring during driving to/from the worksite to the Crew Lead.

It is the responsibility of the Safety Committee to

- Maintain this Safe Work Practice
- Perform periodic audits to assess that these requirements/SWP are being acted upon.
- Reinforce that recommended controls are to be implemented and used appropriately.

Hazards

Hazards relative to driving vehicles may be due to road conditions, driver behavior and behavior of other drivers on the road.

Hazards due to driver behavior include drowsiness/fatigue, distractions within or around the vehicle, alcohol or drug consumption, psychological factors such as stress, lack of familiarity with the vehicle or road conditions.

The environment may introduce hazards due to poor road conditions, poor visibility due to darkness/snow, activities of trail users on road or in parking area, wildlife, or other animals on the road.

Controls

Controls may include elimination/substitution, engineering, warnings, administrative, and/or PPE.

- Good housekeeping is important; keep the vehicle clean. Organize your equipment for the day before operating the vehicle.
- Be familiar with directions to jobsite prior to starting the vehicle.
- Inspect the work vehicle before operation. Walk around the vehicle, check lights, fluids (if necessary); check your load, and ensure tools and materials are secure and tailgate is closed.
- The pre-use inspection provides the opportunity not only to check a familiar vehicle but to become familiar with vehicles that you are not used to. This includes any safety features.
- Be familiar with and follow the rules of the road.
- Always use seatbelts.
- Ensure that your windshield is clean and clear to maintain optimum visibility.
- Always check for and yield to other vehicles, animals, and/or pedestrians before leaving driveway.
- Cell phone use is prohibited while driving. Safely pull over and turn off vehicle if you need to make or take a phone call or have a passenger make or take the call).
- Drive within posted speed limits and/or drive for the road/weather conditions. Assess the risks to determine if your task should be postponed, pending improved road/weather conditions. If you cannot see, do not drive.
- Know your stopping distance at any given speed. Avoid panic stops and sharp turns.
- Stay alert and stop if feeling tired or inattentive.
- When leaving the worksite, again watch for other trail users, including pedestrians/children, animals, pets.
- Including safety equipment in your vehicle is always a good idea, including items such as first aid kits, fire extinguisher, safety warning devices, flashlight, jumper cables, basic tool kit, water, blanket.

- Towing is prohibited unless the vehicle is specifically designed with a winch and the driver is experienced to operate it.
- Do not attempt to pull stuck vehicles with any other vehicle than a tow truck or a vehicle equipped with a winch and a person with winch experience operating it.
- Seriously injured or ill people should be transported for medical treatment ONLY by ambulance, except in absolute emergencies.
- Drive defensively.
- Report accidents/incidents promptly to the correct authorities and to Crew Leaders.

Distracted Driving

- Make driving your first priority at all times.
- Adjust and/or set electronic devices such as radio, audio player, GPS units, etc. before you start driving.
- If the cell phone and/or other wireless communication devices become activated, pull over and stop in a safe area to respond to the device when safe to do so or allow the call to go to voice mail.
- When adjustments to electronic devices are required, pull over and stop when safe to do so.
- Do not resume driving until the conversation and/or adjustment to the electronic device has been completed.
- Passenger(s) may use a cell phone or other electronic devices providing it is not a distraction to the driver.
- Do not make out-going calls while operating the motor vehicle.
- Reminder: The use of cell phones and other wireless devices while driving leads to distractions that can result in traffic accidents. Let your voice mail take your incoming calls while you drive.
- It is recommended that “rescue” vehicle is unimpeded for quick egress. Park front of vehicle facing outward/ ready to leave.

Training

Drivers must be adequately trained and competent, holding a valid license. Consider taking a Defensive Driving Course. If a worker is involved in an accident, training should be reviewed.

Resources, References, Definitions

Revision History

Revision	Date	Description of Change	Personnel Involved
REV 0	Feb 2020	New SWP	D Yanchula
Rev 1	Feb 2023	Reviewed – No changes	D Yanchula

SAFE WORK PRACTICE 4 – CHANGING VEHICLE TIRES

SWP Purpose

Changing vehicle tires can be hazardous, if due care is not taken. This safe work practice (SWP) is intended to help workers in following correct steps in changing tires. When done correctly, hazards will be controlled.

Scope

This SWP applies to any worker who is faced with changing vehicle tires, which could occur in a range of settings.

Responsibilities

Responsibilities apply to the **Trip Manager**/Volunteer Lead, all workers, and the Health and Safety Committee.

It is the responsibility of the **Trip Manager**/Volunteer Lead to

- Communicate to workers the importance of taking due care and following correct steps in changing vehicle tires.
- Reinforce to workers that any recommended controls must be applied consistently
- Require that this SWP be implemented for all vehicles used

It is the responsibility of the Workers to

- Know the proper approach and steps to changing vehicle tires safely.
- Ensure recommended controls are implemented and used appropriately.
- Immediately report any infractions to the Crew Lead.

It is the responsibility of the Safety Committee to

- Maintain this Safe Work Practice
- Perform periodic audits to assess that these requirements/SWP are being acted upon.
- Reinforce that recommended controls are to be implemented and used appropriately.

Hazards

Hazards relative to changing vehicle tires may be due to environmental conditions such as setting and location, weather conditions, time of day/visibility.

Hazards may also be caused by a lack of appropriate tools or traffic control warning devices. Wearing gloves is a useful control, as strands of steel may be poking through the tire and may cause injury.

Hazards due to worker behavior include drowsiness/fatigue, distractions within or around the vehicle, psychological factors such as stress, lack of familiarity with the vehicle or the task. Safe lifting should be practiced during this task.

Controls

Controls may include elimination/substitution, engineering, warnings, administrative, and/or PPE.

- Checking tire pressure regularly and as part of the safe driving pre-use vehicle checklist may prevent the need to change a tire in an awkward or remote location by identifying the issue early.
- Where the tire will be changed is important. Avoid areas of slope, if possible, to limit the possibility of vehicles being unstable/rolling.
- Pull the vehicle safely off the road and onto the right shoulder, if available. If the shoulder is narrow or sloped, try to locate a safe parking location (e.g. turn out). The goal is to keep both you and the travelling public safe.
- Turn the vehicle off.
- Set the emergency brake.
- Turn on hazard lights. You may also wish to open the hood, to signal to other drivers that you are stopped for repairs.
- Pre-planning is useful; if there are passengers or others in the team, share the responsibility and communicate tasks to be done, who will do them, etc.
- Always refer to the vehicle's owner manual prior to starting the task.
- Set up cones/triangles/pylons/reflectors, if available. Set them far enough from the rear of your vehicle to provide adequate warning to approaching traffic.
- Use headlamps/flashlights if this is being done in the dark.
- Place an object in front or behind the tires on the opposite side to act as a wheel chock to prevent the vehicle from rolling.
- Locate, remove, and check the spare tire, the tire iron/lug wrench, and vehicle jack. If any of the equipment looks faulty, do not use it.
- Attempt to loosen lug nuts prior to jacking the vehicle – rotate counterclockwise to loosen.
- Loosen the lug nuts following a star pattern, until all the lug nuts have been slightly loosened.
- Set the jack on level ground and in the location indicated in the owner's manual.
- Slowly jack the vehicle, checking for vehicle and jack stability intermittently. Check that the jack is well-positioned and will not be dislodged.
- Raise the vehicle just high enough for the tire to spin freely.
- Remove the lug nuts and store them in a safe, visible location.
- Carefully support and remove the defective tire from the vehicle and set it on the ground away from oncoming vehicle traffic and so that it will not be a tripping hazard for you or your assistants. Safe lifting should be considered while completing the task.
- Lift the replacement tire onto the wheel studs, ensuring that the tire valve is facing you.
- Replace the lug nuts on the wheel studs and begin to hand tighten, in the star pattern, prior to using the wrench.
- Tighten all lug nuts until snug and rim is tight to hub.
- Slowly lower the vehicle on the jack, until most of the weight is on the tire.

- Again, using the star pattern, use the tire iron to completely tighten the lug nuts onto the vehicle's wheel studs.
- Remove the jack from under the vehicle and place it out of your way and out of the way of oncoming traffic.
- Perform an additional check of the lug nuts to make sure that they are tight and secure, using the tire iron.
- Replace hub cap, if present.
- Clean up the area, returning all tools, tire, reflectors, blocks, etc. to their correct storage locations.
- Re-enter vehicle and safely pull onto roadway.
- Check and re-torque lug nuts on affected wheel after a short period of driving to ensure that the wheel was properly seated after repair.

Training

Workers must be adequately trained. On the job/scenario or demo-based training is useful. If a worker is involved in an accident, training should be reviewed.

Resources, References, Definitions

Revision History

Revision	Date	Description of Change	Personnel Involved
REV 0	Feb 2020	New SWP	D Yanchula
Rev 1	Feb 2023	Reviewed – No change	D Yanchula

SAFE WORK PRACTICE 5 – SECURING VEHICLE LOADS

SWP Purpose

Tools, equipment, and fuel are hauled to trail work sites as part of trail building and maintenance. This is typically conducted by quad trailer; however, this SWP addresses safe loading and hauling in a general sense and can be applied to quads, quad trailers, or truck beds and trailers. This safe work practice (SWP) is intended to help workers in following correct steps in loading and hauling materials. When done correctly, hazards will be controlled.

Scope

This SWP applies to any worker who loads and hauls materials during regular trail maintenance and building, or who assists in these tasks.

Responsibilities

Responsibilities apply to the Trip Manager/Volunteer Lead, all workers, and the Health and Safety Committee.

It is the responsibility of the Trip Manager/Volunteer Lead to

- Communicate to workers the importance of taking due care and following correct steps in loading and hauling materials.
- Reinforce to workers that any recommended controls must be applied consistently
- Require that this SWP be implemented for all instances of loading and hauling, whether quad, quad trailer, or other vehicle.

It is the responsibility of the Workers to

- Know the proper approach and steps to loading and hauling.
- Ensure recommended controls are implemented and used appropriately.
- Immediately report any concerns to the Crew Lead.

It is the responsibility of the Safety Committee to

- Maintain this Safe Work Practice
- Perform periodic audits to assess that these requirements/SWP are being acted upon.
- Reinforce that recommended controls are to be implemented and used appropriately.

Hazards

Hazards relative to loading and hauling may be due to environmental conditions such as trail conditions, temperatures, precipitation, terrain and location, time of day/visibility.

Hazards may also be caused by a lack of appropriate tools, including quad straps/tie downs, fuel containers, etc.

Hazards due to worker behavior include drowsiness/fatigue, distractions within or around the vehicle, psychological factors such as stress, lack of familiarity with the vehicle, the materials, the task, or the trails/terrain. Safe lifting should be practiced during this task.

Poorly loaded materials can result in property damage/loss as well as safety incidents (e.g. quad rolling, trailer detaching, etc.).

Controls

Controls may include elimination/substitution, engineering, warnings, administrative, and/or PPE.

- Wear gloves when loading materials, to reduce risk of cuts, abrasions, bruising.
- Inspect the hauling vehicle, trailer, and materials for condition. Address any defect prior to loading.
- Park the vehicle/trailer on stable and level ground. Engage parking brakes and consider placement of chucks at wheels if terrain is necessarily sloped.
- Turn the vehicle off. Turn on hazard lights.
- If within parking area or roads, ensure that the vehicle is being loaded in a safe location; consider placement of cones or other warning devices to limit risk to public.
- Check tire pressure on vehicles and/or trailers; ensure that these are appropriate for the vehicle, the load, the temperature, and trail conditions/trail cover.
- Inspect trailer hitches prior to use. Ensure that these are in good condition, that the hitch has been secured, that chains are attached as a safety measure, and that brake lights are working consistently.
- For heavy/complex loads, this task is best completed with two individuals who can spot each other during the activity. Ensure that safe lifting techniques are applied consistently.
- Load the vehicle/trailer. Take care when packing loads, to ensure that the vehicle load is balanced. Unbalanced loads increase the risk of tipping.
- Store light containers on top, heavier ones on the bottom.
- Do not overload the capacity of the vehicle, refer to owner's manual.
- This is also a good time to inspect the materials you are loading; damaged materials should be fixed/replaced/left behind.
- Materials must not extend above the sides of the truck box.
- Materials must be covered to protect them from unfavorable weather conditions.
- Ensure that loads are well-secured with quad straps/tie downs or other means. Check the load's security before moving and intermittently during transport, to ensure that shifting has not occurred.
- Secure materials from movement using a cargo net, straps, or rope. The use of bungee cords to secure material is not permitted.
- In the event of a vehicle collision or rollover, materials must be secured in a manner to prevent injury to the driver and passengers.
- Compressed gas cylinders shall be secured in an upright position
- Flag loads which extend beyond the bed of vehicle or trailer.

- To transport fuel or other flammable/dangerous materials, ensure that the container meets current TDG requirements and manufacturer's guidelines. This is relative to both container type and size.
- Ensure that all containers are securely closed.
- Ensure that containers are situated safely and are not at risk of puncture or abrasion during transport.
- Do not overload. It is safer to complete two trips with lighter loads than one heavy load at risk of tipping, damaging the load/vehicle/trailer, or bogging down the vehicle/trailer.
- Ensure that the load does not extend outside of the trailer in a manner which will increase the risk of impact on trees/brush. This is also important for maintaining trailer and vehicle stability on uneven ground. Avoid areas of slope, if possible, to limit the possibility of vehicles being unstable/rolling.
- Follow safe driving rules/guidelines while hauling. Check the load intermittently, if weather conditions change, more frequently in steep or challenging terrain.

Training

Workers must be adequately trained for vehicle use (licensed, vehicles insured/licensed). On the job/scenario or demo-based training is useful. If a worker is involved in an accident, training should be reviewed.

Resources, References, Definitions

Revision History

Revision	Date	Description of Change	Personnel Involved
REV 0	Feb 2020	New SWP	D Yanchula
Rev 1	Feb 2023	Reviewed – No change	D Yanchula

SAFE WORK PRACTICE 6 – FUELING GASOLINE ENGINES

SWP Purpose

This safe work practice is intended to provide guidance to workers in situations where they are required to add fuel to gasoline engines, motors, or tanks.

Scope

This SWP applies to vehicles that are used by workers, any heavy equipment they may need to use and smaller portable gas-powered equipment (e.g. chainsaws, brushers).

Responsibilities

Responsibilities apply to the Trip Manager/Volunteer Lead, all workers, and the Health and Safety Committee.

It is the responsibility of the Trip Manager/Volunteer Lead to

- Enforce the application of this SWP in all gasoline fueling situations.
- Reinforce to workers that any recommended controls must be applied consistently.
- Require that this SWP be implemented for all vehicles and equipment used

It is the responsibility of the Workers to

- Be aware of the potential hazards that may occur during the fueling of tanks and/or equipment.
- Ensure recommended controls are implemented and used appropriately.
- Be aware of and apply manufacturer's instructions.
- Inspect equipment and work areas for hazards before, during, after process.
- Select and use appropriate PPE.
- Immediately report any safety events (near misses, hazard identifications, incidents) to the Crew Lead.

It is the responsibility of the Safety Committee to

- Maintain this Safe Work Practice
- Perform periodic audits to assess that these requirements/SWP are being acted upon.
- Reinforce that recommended controls are to be implemented and used appropriately.

Hazards

Hazards include explosion/fire, inhalation, skin contact, eye contact, and/or ingestion.

Gasoline vapors are highly flammable and can ignite at temperatures as low as -45°C. A single cup of gasoline, when vaporized and ignited, has the explosive power of five sticks of dynamite. Gasoline ignites easily, burns strongly, and vapors may explode under certain conditions.

Exposure to vapor during normal refueling activities is not considered to be a significant health concern. However, significant spills can result in short-term exposures to high concentrations of vapors. This can cause irritation of the eyes, nose, respiratory tract, and possible signs of central nervous system depression.

Minor accidental skin contact may occur during refueling and is not considered to be a significant health concern. Major skin exposure for longer periods of time will only likely occur in accidental spill situations (e.g. due to soaking of clothing during pump malfunction). Skin contact may cause local irritation. If exposure is more frequent or for a longer period, reactions may be more severe. Gasoline exposure can result in dry, cracked skin.

Splashing into the eye may cause irritation and discomfort. This is usually temporary; permanent damage is unlikely to occur.

Hazards due to worker behavior include drowsiness/fatigue, distractions within or around the vehicle, psychological factors such as stress, lack of familiarity with the vehicle or the task. Safe lifting should be practiced during this task.

Controls

Controls may include elimination/substitution, engineering, warnings, administrative, and/or PPE.

- Park vehicle as close to the fueling point as safely possible.
- Place the vehicle in park and turn off the ignition. Do not add gasoline to a running engine/motor. Always turn off the engines/motors prior to refueling.
- Ensure the fuel nozzle is always in contact with the vehicle filler spout.
- Avoid spilling. Do not overfill tanks.
- Ensure good ventilation.
- Do not smoke in proximity. Ensure there are no ignition sources within the immediate area of the vehicle and fuel pump (cigarettes, lighters, cell phones).
- Do not operate a cell phone while fueling; static electricity can cause a problem.
- Avoid breathing in the vapors. Turn your face away from the nozzle and keep the gasoline away from your eyes and skin. Wearing gloves and safety glasses is advisable.
- **Where possible, in field, place spill collection below filling port to capture minor spills**
- When fueling is complete, lightly tap the end of the nozzle in the fuel port to remove any fuel drops.
- Replace the fuel nozzle and the fuel cap.
- Keep gasoline away from all ignition sources (heat, sparks, open flame).
- If a worker does react to exposure to the fumes, remove the person to a fresh air location.
- If significant skin contact occurs, wash all affected areas with soap and water.
- If eyes are contacted, flush with water.
- Never siphon gasoline by mouth.
- Never use gasoline as a cleaning solvent.
- Follow posted regulations.

- If transporting gasoline to a work site, select the correct container following Dangerous Goods Regulations and check the container for wear and tear before use.
- Good housekeeping is essential; fuel storage and refueling areas should be weed and debris free. If feasible, store fuel out of access from bears.
- Check fuel/oil ratios, if needed for specific equipment (e.g. chainsaws).
- Ensure that equipment is turned off and cool before refueling.
- Use appropriate equipment for any fuel transfer, such as funnels.
- Clean off any spilled fuel before starting the engine.
- Carry spill kits appropriate to the size of the tanks/engines.
- Report any spill to Crew Leads.
- Eye protection is required when fueling)

Training

Workers must be adequately trained. On the job/scenario or demo-based training is useful. If a worker is involved in an accident, training should be reviewed.

Resources, References, Definitions

Revision History

Revision	Date	Description of Change	Personnel Involved
REV 0	Feb 2020	New SWP	D Yanchula
Rev 1	Feb 2023	Changes in BOLD	D Yanchula

SAFE WORK PRACTICE 7 – SAFE LOADING OF SMALL EQUIPMENT

SWP Purpose

Equipment and tools often need to be loaded and moved from jobsite to jobsite. Unsafe loading and trailering can result in personal injury and property damage. This safe work practice (SWP) is intended to help workers in following correct steps in loading and trailering. When done correctly, hazards will be controlled.

Scope

This SWP applies to any worker who is involved in loading and trailering.

Responsibilities

Responsibilities apply to the Trip Manager/Volunteer Lead, all workers, and the Health and Safety Committee.

It is the responsibility of the Trip Manager/Volunteer Lead to

- Communicate to workers the importance of taking due care and following correct steps in loading and trailering equipment on the job.
- Reinforce to workers that any recommended controls must be applied consistently
- Require that this SWP be implemented for all vehicles/equipment.

It is the responsibility of the Workers to

- Know the proper approach and steps to both loading and hauling equipment.
- Ensure recommended controls are implemented and used appropriately.
- Immediately report any infractions or incidents to the Crew Lead.

It is the responsibility of the Safety Committee to

- Maintain this Safe Work Practice
- Perform periodic audits to assess that these requirements/SWP are being acted upon.
- Reinforce that recommended controls are to be implemented and used appropriately.

Hazards

Hazards relative to loading and trailering equipment may be due to environmental conditions such as setting and location, weather conditions, time of day/visibility.

Hazards may also be caused by a lack of appropriate tools or traffic control warning devices.

Hazards due to worker behavior include drowsiness/fatigue, distractions within or around the vehicle, psychological factors such as stress, lack of familiarity with the vehicle or the task. Safe lifting should be practiced during this task.

Controls

Controls may include elimination/substitution, engineering, warnings, administrative, and/or PPE.

- Select a level and stable loading area; avoid slopes, areas with debris (e.g. deadfall), mud or other areas of poor traction/stability.
- Put on the parking brake.
- If necessary, block the wheels as well, although this suggests a sloped location. Selection of a more appropriate location is recommended.
- Check the trailer deck for traction hazards.
- Lower the ramp, following manufacturer's instructions.
- Align the machine with the ramps and drive slowly onto the truck deck.
- Use a spotter while driving up the ramps.
- Once the machine is in place on the truck deck, apply the equipment parking brake, lower cutting edges/booms, if present. Shut down the equipment and remove the key to a safe place.
- Secure the machine using quad/ratchet straps, chains, etc.
- Remove the ramps and secure them.
- Check the deck for debris and clean off any potential projectiles.
- Drive the truck/trailer a short distance and recheck the straps/restraints in case of loosening or settling. On long trips or in cases of changing weather (i.e. rain, snow), check frequently.
- Tighten as necessary.
- If parking/leaving the truck with the machine on board, consider use of locks to prevent theft. Parking vehicle with rear to wall will also prevent theft.

Training

Workers must be adequately trained. On the job/scenario or demo-based training is useful. If a worker is involved in an accident, training should be reviewed.

Resources, References, Definitions

Revision History

Revision	Date	Description of Change	Personnel Involved
REV 0	Feb 2020	New SWP	D Yanchula
Rev 1	Feb 2023	Reviewed – No change	D Yanchula

SAFE WORK PRACTICE 8 – VEHICLE EXTRACTION & WINCHING

SWP Purpose

Extracting vehicles (trucks, quads, motorbikes) can be a hazardous task, creating risk of injury to driver and bystanders/assistants. Environmental degradation (rutting, spills, vegetation damage) can also result, as well as damage to the vehicles themselves. This safe work practice (SWP) is intended to guide workers in safe vehicle extraction procedures.

Scope

This SWP applies to any worker who is involved in vehicle extraction, either as driver or assistant.

Responsibilities

Responsibilities apply to the Trip Manager/Volunteer Lead, all workers, and the Health and Safety Committee.

It is the responsibility of the Trip Manager/Volunteer Lead to

- Communicate to workers the importance of taking due care and following correct steps in vehicle extractions.
- Reinforce to workers that any recommended controls must be applied consistently
- Require that this SWP be implemented for all vehicles/equipment.
- **Ensure an Annual maintenance and inspection is completed for extraction and winching equipment by Equipment Maintenance Manager**

It is the responsibility of the Workers to

- Know the proper approach and steps to vehicle extraction.
- Ensure recommended controls are implemented and used appropriately.
- Immediately report any infractions or incidents to the Crew Lead.

It is the responsibility of the Safety Committee to

- Maintain this Safe Work Practice
- Perform periodic audits to assess that these requirements/SWP are being acted upon.
- Reinforce that recommended controls are to be implemented and used appropriately.

Hazards

Hazards relative to winching vehicles may be due to environmental conditions such as terrain, slope, vegetation, temperature/weather conditions, daylight – or lack thereof - and the cause of the issue itself – i.e. mud, snow.

Hazards may also be caused by a lack of appropriate tools, such as jacks, straps, winch cables, etc.

Hazards due to worker behavior include fatigue, distractions within or around the vehicle, psychological factors such as stress, lack of familiarity with the vehicle or the task. Safe lifting should be practiced during this task. Frustration often causes poor decision making in these types of scenarios.

Controls

Controls may include elimination/substitution, engineering, warnings, administrative, and/or PPE.

- Be sure to use appropriate equipment. Every piece of equipment used in a recovery operation MUST be capable of SAFELY handling the loads that will be imposed.
- **Winch and Extraction Equipment maintenance and inspection done.**
- Inspect equipment prior to use and, preferably, prior to leaving the trailhead. Any equipment that is damaged or in poor condition should be removed from use and tagged for repair or replacement.
- Pay particular attention to the winch cable. Look for localized damage and wear, especially at wire rope attachments. Inspect all parts that come in contact with the wire rope. Look for kinks, broken wires, abrasions, lack of lubrication, rust damage, crushing, reduction of diameter, stretch or other obvious damage. If any of these conditions exists or if there is any other apparent damage to the wire rope, retire the cable. When inspecting winch cable, durable work gloves shall be worn.
- NEVER overload a wire rope. This means NEVER use the rope where the load applied is greater than the working load.
- NEVER 'SHOCK LOAD' a wire rope. A sudden application of force or load can cause both visible external damage and internal damage. There is no practical way to estimate the force applied by shock loading a rope. The sudden release of a load can also damage a wire rope.
- Lubricant is applied to the wires and strands of a wire rope when manufactured. This lubricant is depleted when the rope is in service and should be replaced periodically.
- When in doubt about the extent of the damage, retire the wire rope in question immediately.
- Hooks should also be inspected regularly, or the safety of you and those around you during recovery.
- Hook visual inspection should be conducted before each use, looking for:
    - Cracks, nicks, gouges
    - Deformation
    - Damage from chemicals
    - Damage or malfunction of the throat latch, if provided.
- If any of these conditions are found, the hook should be retired and replaced.
- Place a blanket across a loaded winch cable to mitigate the cable’s chances of flinging uncontrollably if the cable should snap.

Training

Workers must be adequately trained. On the job/scenario or demo-based training is useful. If a worker is involved in an accident, training should be reviewed.

Resources, References, Definitions

Revision History

Revision	Date	Description of Change	Personnel Involved
REV 0	Feb -2020	New SWP	D Yanchula
REV 1	May 2020	Gloves when inspecting cable	D Borthwick, J Gruttz
Rev 2	Feb 2023	Changes in BOLD	D Yanchula

SAFE WORK PRACTICE 9 – PORTABLE POWER & HAND TOOLS

SWP Purpose

The purpose of this SWP is to establish written guidelines for using hand and power tools, including air tools/compressed air. Use of fixed bench grinders is also covered, as these are used to sharpen and maintain hand tools. The standards are intended to protect workers from potential hazards associated with hand and power tools.

Scope

All GDTA workers will comply with the guidelines in this SWP and manufacturers' instructions.

Responsibilities

Responsibilities apply to the Trip Manager/Volunteer Lead, all workers, and the Health and Safety Committee.

It is the responsibility of the Trip Manager/Volunteer Lead to

- Maintain and use applicable tools in compliance with the SWP and manufacturers' instructions
- Reinforce to workers that any recommended controls must be applied consistently
- Require that this SWP be implemented
- **Verify maintenance is complete by Equipment Manager and confirm with visual inspection before trip to ensure good working condition**

It is the responsibility of the Workers to

- Comply with this SWP and follow manufacturers' instructions
- Ensure recommended controls are implemented and used appropriately.
- Immediately report any concerns or incidents to the Crew Lead
- Remove damaged tool from use and mark it "out of service".

It is the responsibility of the Safety Committee to

- Maintain this Safe Work Practice
- Perform periodic audits to assess that these requirements/SWP are being acted upon.
- Reinforce that recommended controls are to be implemented and used appropriately.

Hazards

Hand and power tools can be hazardous. They have the potential to cause severe injuries when used improperly or poorly maintained. Sharpening tools is a part of maintenance; using bench grinders for this purpose must also be done safely.

Hazards due to worker behavior include drowsiness/fatigue, psychological factors such as stress, or lack of familiarity with the tool or the task. Environmental hazards may be caused by poor weather, extreme heat or cold working conditions, and poor lighting.

Controls

Controls may include elimination/substitution, engineering, warnings, administrative, and/or PPE. Guidelines are presented below. Additional SWP examples are included, following.

Tools - General

- Use hand tools only for the purpose for which they were intended.
- Inspect tools for defects prior to use. Look out for –
    - Loose heads on hand tools (e.g. mattocks, Pulaskis, McLeod and other rakes, axes, and shovels)
    - Cracked tool blade
    - Chisels and wedges with mushroomed heads
    - Split or cracked handles
    - Chipped or broken drill bits
    - Wrenches with worn-out jaws
    - Files with no handles
    - Broken, jammed or inoperative safety guards
    - Damaged grounding on double-insulated tools
    - Absence of ground wire on cords and plugs
    - Inconsistent or inoperative on/off switch
    - Presence of incorrect grinder wheel
- Remove any defective tools from service and tag “Out of Service”.
- All damaged or worn parts should be promptly repaired or replaced.
- Do not use the tool if you are not trained.
- Ensure safety glasses and face shields are used for abrasive work such as grinding and chipping.
- Make sure you use the right tool for the job.
- Do not remove or operate tools without the proper manufacturer’s safety guards.

Electrical Tools

- Do not operate tools that are missing ground plugs or have frayed cords.
- Do not operate electrical tools in wet areas
- If any tingling is felt when the tool is touched, unplug the tool at the source and remove from service.
- All electrical tools should be grounded or double insulated.

Fixed Bench Grinders

- When using the grinder, wear gloves, eye protection (safety glasses, face shield), safe footwear, and hearing protection.
- Secure loose items such as clothing, draw strings, long hair, etc. to prevent tangling in the grinder
- Follow operator’s instructions and familiarize yourself with the grinder prior to use
- Inspect the grinder to ensure that switches, cords, grinding stone/brush are in good working order; if this is in doubt, do not use the grinder, but tag it for repair

- Ensure that the guards are in place
- Ensure that the tool rest is not below the horizontal center line and no more than 3mm from the face of the wheel
- Communicate with any workers in the area, to ensure that they are safely out of the way
- Hold the part firmly but do not apply excessive force on the tool against the grinder
- Do not try to hold small parts with your fingers against the wheel; attach the small piece to another tool/extender such as vice grips
- Do not grind against the side of the wheel
- Maintain grinder wheel shape and wear, following manufacturer's specifications
- Take breaks during the task, to reduce stress on specific muscle groups
- Always turn off the grinder and unplug it before performing any adjustments, maintenance, or repairs

SAFE Work Procedure Job Title or task: Using Hand Tools (non power)

Department / Area:	Approved By:	Date Created:	Review / Revised date:
Maintenance	J. President		

Potential Hazards: Fill in those that apply	Personal protective equipment / devices required / other safety considerations
H M L risk for injury ☐ ☒ ☐ Awkward / sustained postures – varies with task ☐ ☒ ☐ Forceful exertions – pushing, gripping, twisting, ☐ ☒ ☐ Repetitive movements ☐ ☐ ☐ Vibration ☐ ☐ ☐ Compression ☐ ☒ ☐ Sharp points / edges – knives, pliers ☐ ☒ ☐ Pinch points – in tools or against materials ☐ ☐ ☐ Materials falling ☐ ☐ ☐ Surfaces causing falls ☐ ☐ ☐ Moving machinery ☐ ☐ ☐ Chemicals ☐ ☐ ☐ Biological pathogens ☐ ☐ ☐ Electrical ☐ ☐ ☐ Extreme heat / cold ☐ ☐ ☐ Noise ☐ ☐ ☐ Combustibles / flammables ☐ ☐ ☐ Other _____	-Gloves if using knives -Safety footwear **Training / Reference information** -Injury prevention orientation -In house training -Tool manuals / instructions

Note: Signs and symptoms of a musculoskeletal injury (MSI) can include pain, burning, swelling, stiffness, numbness/tingling, and/or loss of movement or strength in a body part. Report these to your supervisor.

Employers must ensure that workers are trained and follow this SAFE Work Procedure

Steps to perform this task safely:

Note: The instructions below are relevant for non powered hand tools including but not limited to screwdrivers, hammers, hand saws, utility knives, cutters, pliers, etc

-Do not use broken tools or tools that have cracks or splits in handles
-Only use tools in a manner that they have been designed
-Carry sharp tools in their sheath or holster
-Keep cutting tools sharp so less effort is required for them to be effective
-When using knives, sheaths or shears, keep your other hand or body parts out of the cut line, ensure that there is a barrier between the knife and your body or cut in a direction away from your body
-Try to work in neutral positions as often as possible (wrists and back straight, elbows in, reduce back twisting by instead taking small steps to reposition, etc) and try to avoid overreaching
-Take micro breaks or change tasks periodically to reduce repetitive or physically demanding tasks
-Keep work areas free of loose tools which could be tripped over and after use, return tools to designated areas

Training

Workers must be adequately trained. On the job/scenario or demo-based training is useful. Always read the manufacturer's/operator's manual prior to use. If a worker is involved in an accident, training should be reviewed.

Resources, References, Definitions

Revision History

Revision	Date	Description of Change	Personnel Involved
REV 0	Feb -2020	New SWP	D Yanchula
REV 1	Apr 2020	Visual inspection by Trip Manager, Volunteer to mark damaged tools "out of service".	D Hockey, D Borthwick, D Yanchula, J Gruttz, J Bateson
Rev 2	Feb 2023	Changes in BOLD	D Yanchula

SAFE WORK PRACTICE 10 – PREVENTING HEAT STRESS

SWP Purpose

The purpose of this SWP is to prevent heat stress in workers through identifying when this may occur, how to recognize the symptoms, and how to best control the hazards.

Scope

This SWP applies to all workers and applies when the Humidex is above 45 ("dangerous", as per attached Humidex Index; Canadian Centre for Occupational Health and Safety). If workers are wearing protective clothing (e.g. Flame Retardant or other coveralls (incl. Tyvek/Nomex), the risk may occur at lower humidex levels (e.g. "great discomfort", 40-45 in attached Humidex Index).

Responsibilities

Responsibilities apply to the Trip Manager/Volunteer Leader, all workers, and the Health and Safety Committee.

It is the responsibility of the Trip Manager/Volunteer Leader to

- Evaluate the potential for heat stress associated with the day's work, discuss, and apply controls; this should be documented in the daily tailgate meeting
- Educate/remind workers of the symptoms of heat stress
- Monitor workers for symptoms and encourage communication
- Provide drinking water and shade
- **Prepare Incident Report if worker experiences heat exhaustion or heat stroke**

It is the responsibility of the Workers to

- Be aware of the hazards and symptoms of heat stress
- Be responsible in maintaining personal and crew health
- Monitor yourself and fellow crew members for symptoms and communicate to Crew Lead if any symptoms noted

It is the responsibility of the Safety Committee to

- Maintain this Safe Work Practice
- Perform periodic audits to assess that these requirements/SWP are being acted upon.
- Reinforce that recommended controls are to be implemented and used appropriately.

Hazards

Heat stress can be subdivided into four 'disorders', each with unique symptoms and first aid treatments, as follows:

- Heat Rash: occurs in hot and humid environments, particularly in situations where sweat does not evaporate easily; results in red skin and, in severe cases, infection can occur. First aid

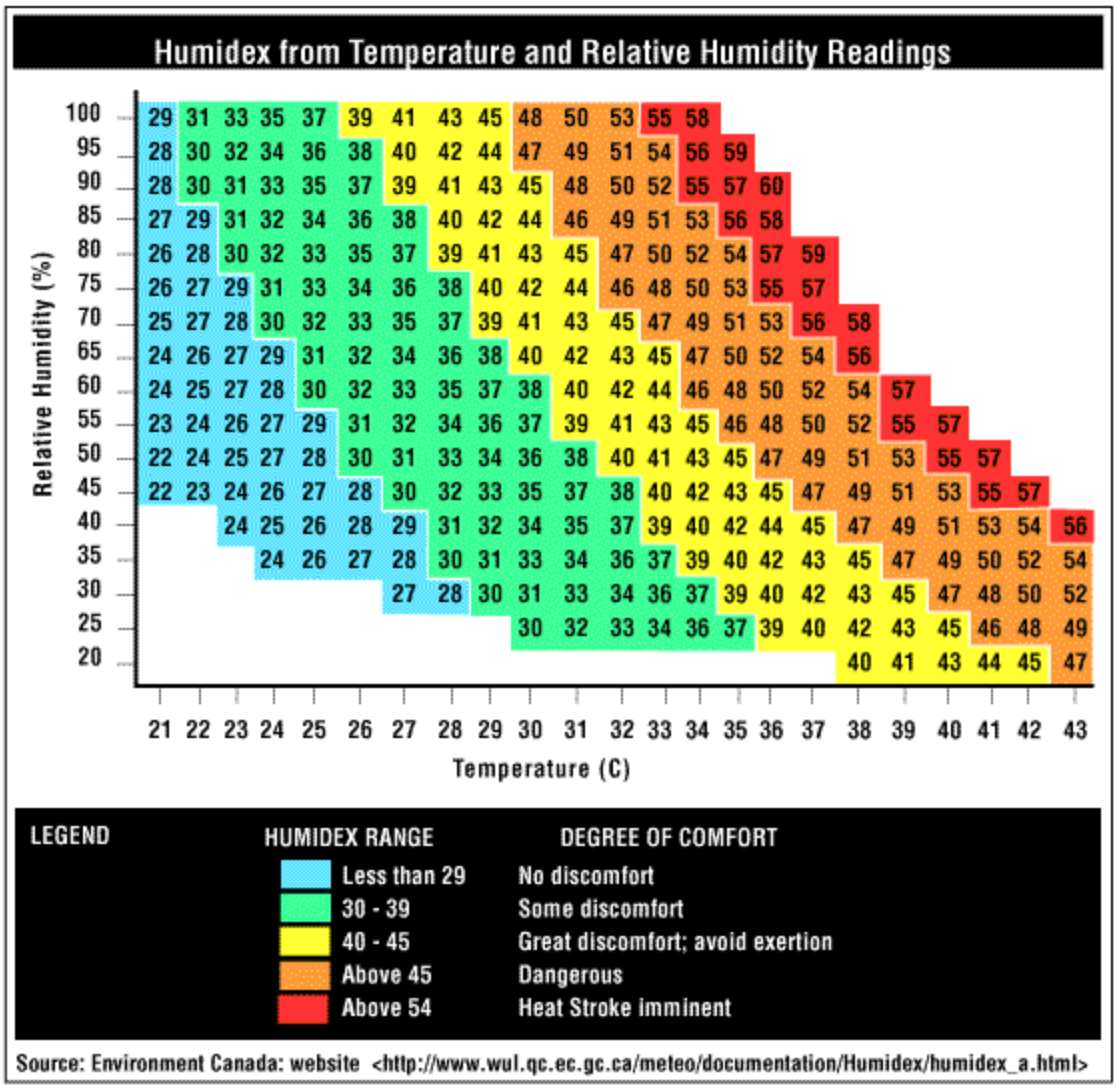
treatment includes removing individual from the sun/into shade, allowing skin to dry, and washing skin with cool water.

- Heat Cramps: are painful muscle cramps caused by losing too much salt through sweating and occurs typically in the most frequently or heavily used muscles. Cramps are more typical later in a working day or even after muscles have cooled. First aid includes moving the individual to a cooler, shaded location; washing/sponging skin with cool water. However, following this move, watch for shivering or feeling cold. Provide water, juice, 'sport drinks' if individual is not feeling nauseous.
- Heat Exhaustion: may include heavy sweating, weakness, cool/pale/clammy skin, fainting, vomiting; caused by inadequate fluid intake and/or salt intake. First aid includes removing individual form the heat/sun and into the shade; lying down; washing/sponging skin with cool water/cloths; providing some water/fluids unless vomiting. Continuous vomiting indicates a need to seek medical attention.
- Heat Stroke: indicates a high body temperature, with symptoms including hot, dry skin, possibly red/mottled/bluish, rapid pulse, possible fainting/loss of consciousness, mental confusion, convulsions. First aid includes moving individual to a cooler location and cooling quickly using ice packs/wet cloths/air conditioning. Fluids/medications are not suggested. ***Heat stroke is a medical emergency and medical attention is required.*** First aid is only for immediate response.

Controls

Prevention is the best control. Consider and use the following controls:

- Provide shade at work site, including umbrellas, awnings, tarps.
- Provide drinking water sufficient for crew for length of expected day, including contingencies. Encourage workers to carry drinking water on their person for frequent drinking rather than water only in their day pack.
- Alternate work and rest periods and increase length or rest periods as temperature/humidity increases
- Alter work schedule so that most intense work is done during cooler times of the day or stop work and reschedule for a cooler day
- Stop work for crew if heat stress symptoms are noted
- Cooling vests can be used to reduce risks of heat stress
- Monitor the crew for symptoms and remind crew to drink fluids
- Check in regularly with any crew member who may be working alone
- Recommend using sunscreen, hats, long-sleeved light clothing


Humidex from Temperature and Relative Humidity Readings
Relative Humidity (%)
100 29 31 33 35 37 39 41 43 45 48 50 53 55 58
95 28 30 32 34 36 38 40 42 44 47 49 51 54 56 59
90 28 30 31 33 35 37 39 41 43 45 48 50 52 55 57 60
85 27 29 31 32 34 36 38 40 42 44 46 49 51 53 56 58
80 26 28 30 32 33 35 37 39 41 43 45 47 50 52 54 57 59
75 26 27 29 31 33 34 36 38 40 42 44 46 48 50 53 55 57
70 25 27 28 30 32 33 35 37 39 41 43 45 47 49 51 53 56 58
65 24 26 27 29 31 32 34 36 38 40 42 43 45 47 50 52 54 56
60 24 25 27 28 30 32 33 35 37 38 40 42 44 46 48 50 52 54 57
55 23 24 26 27 29 31 32 34 36 37 39 41 43 45 46 48 50 52 55 57
50 22 24 25 27 28 30 31 33 34 36 38 40 41 43 45 47 49 51 53 55 57
45 22 23 24 26 27 28 30 32 33 35 37 38 40 42 43 45 47 49 51 53 55 57
40 24 25 26 28 29 31 32 34 35 37 39 40 42 44 45 47 49 51 53 54 56
35 24 26 27 28 30 31 33 34 36 37 39 40 42 43 45 47 49 50 52 54
30 27 28 30 31 33 34 36 37 39 40 42 43 45 47 48 50 52
25 30 32 33 34 36 37 39 40 42 43 45 46 48 49
20 40 41 43 44 45 47
21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43
Temperature (C)
LEGEND
HUMIDEX RANGE
DEGREE OF COMFORT
Less than 29
No discomfort
30 - 39
Some discomfort
40 - 45
Great discomfort; avoid exertion
Above 45
Dangerous
Above 54
Heat Stroke imminent
Source: Environment Canada: website <http://www.wul.qc.ec.gc.ca/meteo/documentation/Humidex/humidex_a.html>

Training

Workers must be educated regarding the risks, symptoms, and controls, as identified in this SWP. Appropriate number of first aiders relative to crew size must be on site. Ensure that crew members are familiar with emergency communication equipment on site to allow for quick response if a heat stress incident occurs.

Resources, References, Definitions

https://www.ccohs.ca/oshanswers/phys_agents/humidex.html

Revision History

Revision	Date	Description of Change	Personnel Involved
REV 0	Feb 2020	New SWP	D Yanchula
Rev 1	Feb 2023	Changes in BOLD	D Yanchula

SAFE WORK PRACTICE 11 – USING STEPSTOOLS & LADDERS

SWP Purpose

The purpose of this SWP is to establish written guidelines for using step ladders and step stools to reduce risk of falling and developing musculoskeletal injury through poor ergonomics.

Scope

All GDTA workers will comply with the guidelines in this SWP and manufacturers' ratings.

Responsibilities

Responsibilities apply to the Trip Manager/Volunteer Lead, all workers, and the Health and Safety Committee.

It is the responsibility of the Trip Manger/Volunteer Lead to

- Maintain and use correct ladders/stools for the job, in compliance with the SWP and manufacturers' ratings.
- Reinforce to workers that any recommended controls must be applied consistently
- Require that this SWP be implemented
- **Ensure that ladder has been inspected by Equipment Manager for each ladder or stool used.**

It is the responsibility of the Workers to

- Comply with this SWP and follow manufacturers' ratings
- Ensure recommended controls are implemented and used appropriately.
- Immediately report any concerns or incidents to the Crew Lead

It is the responsibility of the Safety Committee to

- Maintain this Safe Work Practice
- Perform periodic audits to assess that these requirements/SWP are being acted upon.
- Reinforce that recommended controls are to be implemented and used appropriately.

Hazards

Using the wrong ladder/stool for the job can result in risk of falling, while continued use can result in development of musculoskeletal injury. Injury may be due to long and sustained use of the ladder/stool, forcing workers into awkward postures. Carrying heavy ladders alone may introduce risk of injury or strain; safe lifting should be practiced. Ladders can cause pinch points, particularly extendable ladders which can trap fingers and cause injury. Falling is a common risk; this can be due to falling off the ladder, as well as the ladder itself falling.

Hazards due to worker behavior include drowsiness/fatigue, psychological factors such as stress, or lack of familiarity with the tool or the task. Environmental hazards may be caused by poor weather, extreme

heat or cold working conditions, poor lighting, uneven terrain/footing. Hazards due to equipment can be caused by poor maintenance and inspection practices.

Controls

Controls may include elimination/substitution, engineering, warnings, administrative, and/or PPE. Guidelines are presented below. Additional SWP examples are included, following.

- Wear gloves and safe footwear
- Watch for signs of musculoskeletal injury, such as pain, burning sensation, swelling, stiffness, numbness/tingling, and/or loss of range of movement or strength in a specific body part; communicate any such signs/symptoms to the Crew Lead
- Always inspect the ladder/stool before use, including integrity, excessive wear/damage; if the ladder/stool appears worn, broken, or in any way unsafe, remove it from service
- Step ladders should not be more than 6 m high when set up for use
- Use a spotter when possible
- Flag off and/or place signage regarding overhead work, particularly if the ladder is placed in a busy area
- Ensure that the ladder is placed on a level and solid surface
- Ensure that the angle of placement is not extreme
- Test the ladder for stability prior to climbing
- Always face the ladder when going up or down, taking only one step at a time, and holding the rails with both hands
- When extending your arms beyond the edges of the stepladder, make sure your body stays centered on the ladder itself
- Do not stand on the top step of the ladder or stool, unless the manufacturer permits this, typically when there is a rail/barriered platform at the top
- Remember that changes in weather (e.g. rain) can affect the stability of the ladder; this should be tested each time the ladder is used – be aware of changing work conditions
- Do not leave step ladders/stools unattended; always return them to designated storage area when finished with your task
- Weight capacities are attached to all step, extension, and multi-position ladders. Check these before use and work within these posted limits. General guidelines are:
    - Type IAA: Special Heavy Duty, up to 375 lbs.
    - Type IA: Industrial, up to 300 lbs.
    - Type I: Industrial; up to 250 lbs.
    - Type III: Home use only, light duty; up to 200 lbs.

SAFE Work Procedure Job Title or Task: Step ladders, Step stools

Department / Area:	Approved By:	Date Created:	Review / Revised date:
Maintenance	J. President		

Potential Hazards: Fill in those that apply	Personal protective equipment / devices required / other safety considerations
H M L risk for injury ☐ ☐ ☒ Awkward / sustained postures ☐ ☒ ☐ Forceful exertions – carrying ladder ☐ ☐ ☐ Repetitive movements ☐ ☐ ☐ Vibration ☐ ☐ ☐ Compression ☐ ☐ ☐ Sharp points / edges ☐ ☐ ☒ Pinch points – fingers in ladder ☐ ☐ ☐ Falling material ☐ ☐ ☐ Surfaces causing falls ☐ ☐ ☐ Moving machinery ☐ ☐ ☐ Chemicals ☐ ☐ ☐ Biological pathogens ☐ ☐ ☐ Electrical ☐ ☐ ☐ Extreme heat / cold ☐ ☐ ☐ Noise ☐ ☐ ☐ Combustibles / flammables ☐ ☒ ☐ Risk of falling	-Safety footwear
	Training / Reference information -Injury prevention orientation -Ladders must comply with requirements outlined in MR 217/2006 Part 13

Note: Signs and symptoms of a musculoskeletal injury (MSI) can include pain, burning, swelling, stiffness, numbness/tingling, and/or loss of movement or strength in a body part. Report these to your supervisor.

Employers must ensure that workers are trained and follow this SAFE Work Procedure

Steps to perform this task safely:

-A step ladder cannot be more than 6 m when set up for use

-Inspect the ladder for integrity, excessive wear / damage and if damage is apparent, remove from service
-Place the ladder feet on a level, solid surface, ensuring the 4 feet grip and the legs are secure in place with metal braces. Ensure brakes are engaged if the step ladder has these
-Do not set up the step ladder sideways to the work unless there is a railed platform at the top
-Go up and down a ladder facing it, taking only 1 step at a time. Hold the side rails with both hands
-Only extend your arms beyond the sides of the stepladder. Keep your body centred
-Do not stand on top of the step ladder / stool unless the manufacturer permits such as when it has a railed platform at the top
-Do not over reach when working on a step ladder / stool
-Do not leave step ladders / stools unattended. Return to designated storage area

Weight capacities are attached to all step, extension and multi position ladders. Below are guidelines but check your ladder manufacturer for the ratings for your ladder.
Type IAA: Special Heavy duty. Up to 375 lbs
Type IA: Industrial. Up to 300 lbs
Type I: Industrial. Up to 250 lbs
Type III: Home use only, light duty. Up to 200 lbs

Training

Workers must be adequately trained. On the job/scenario or demo-based training is useful. If a worker is involved in an accident, training should be reviewed.

Resources, References, Definitions

Revision History

Revision	Date	Description of Change	Personnel Involved
REV 0	Feb 2020	New SWP	D Yanchula
Rev 1	Feb 2023	Changes in BOLD	D Yanchula

SAFE WORK PRACTICE 12 – USING A GAS BRUSH SAW

SWP Purpose

The purpose of this SWP is to establish written guidelines for using gas brush saws safely, to reduce risk of injury to the user and others in the vicinity.

Scope

All GDTA workers will comply with the guidelines in this SWP and manufacturers' instructions.

Responsibilities

Responsibilities apply to the Trip Manager/Volunteer Lead, all workers, and the Health and Safety Committee.

It is the responsibility of the Trip Manager/Volunteer Lead to

- Maintain the tool, in compliance with the SWP and manufacturers' instructions.
- Reinforce to workers that any recommended controls must be applied consistently
- Require that this SWP be implemented
- **Visually inspect each brush saw to ensure it is in good working order – Verify pre-season maintenance and inspection is completed by Equipment Manager**

It is the responsibility of the Workers to

- Comply with this SWP and follow manufacturers' instructions
- Ensure recommended controls are implemented and used appropriately.
- Immediately report any concerns or incidents to the Trip Manager/ Crew Lead

It is the responsibility of the Safety Committee to

- Maintain this Safe Work Practice
- Perform periodic audits to assess that these requirements/SWP are being acted upon.
- Reinforce that recommended controls are to be implemented and used appropriately.

Hazards

Hazards due to worker behavior include fatigue, psychological factors such as stress, or lack of familiarity with the tool or the task. Environmental hazards may be caused by poor weather, extreme heat, poor lighting, uneven terrain/footing. Hazards due to equipment can be caused by poor maintenance and inspection practices. Hazards include ergonomics relative to manual lifting and sustained use of the brush saw, such as lifting/twisting and constant vibrations. The saw blade is sharp, and is a cutting edge, introducing risk of injury. Flying debris can also cause injury for workers in the vicinity. Unsafe refueling can cause fire risk.

Controls

Controls may include elimination/substitution, engineering, warnings, administrative, and/or PPE. Guidelines are presented below. Additional SWP examples are included, following.

- Wear eye protection (e.g. safety glasses with side shields) and a face shield
- Do not operate the brush saw while wearing shorts (long pants or chaps over shorts only)
- Use hearing protection
- Use safe footwear
- Wear vibration reducing gloves or take breaks if any tingling is felt in hands after 15 min of use.
- If using the brush saw in dry and dusty conditions, use a disposable respirator/face mask
- Use a shoulder strap where possible to reduce ergonomic injury/strain
- Always inspect the brush saw before use, including integrity, excessive wear/damage; if the brush saw condition appears poor, worn, broken, or in any way unsafe, tag it for replacement/repair and remove it from service
- Ensure that the guard is secure
- During operation, move your feet to turn rather than repetitively twisting your back
- Try to angle the brush saw head slightly into the area being cut
- Always use the machine on the appropriate materials; do not try to cut items larger than is specified in the operator's manual
- Take extra care when working in areas where hard debris could be picked up and thrown; ensure that no one is near enough to be struck.
- Let the machine cool for 2-3 minutes prior to re-fueling. Use a funnel to reduce spills, **place a spill collection pan below filling nozzle where possible** and fuel in an area with adequate ventilation.
- Turn off the machine prior to adjusting the brush saw.
- Familiarize yourself with brush saw operation before using it
- Machine MUST be turned off when passing people on the trail
- Swamper, shall eye and ear protection and stay 10 meters behind brusher
- Gloves should be used while sharpening or changing blades

SAFE Work Procedure Job Title or Task: Gas Weed Trimmer

Department / Area:	Approved By:	Date Created:	Review / Revised date:
Maintenance	J. President		

Potential Hazards: Fill in those that apply	Personal protective equipment / devices required / other safety considerations
H M L risk for injury ☐ ☐ ☒ Awkward / sustained postures – twisting ☐ ☐ ☐ Forceful exertions ☐ ☒ ☐ Repetitive movements - twisting ☐ ☐ ☒ Vibration – (hand, arm) increase effects with time ☐ ☐ ☐ Compression ☐ ☐ ☐ Sharp points / edges ☐ ☐ ☐ Pinch points ☐ ☐ ☐ Materials falling ☐ ☐ ☐ Surfaces causing falls ☐ ☐ ☐ Moving machinery ☐ ☐ ☐ Chemicals ☐ ☐ ☐ Biological pathogens ☐ ☐ ☐ Electrical ☐ ☐ ☐ Extreme heat / cold ☐ ☐ ☐ Noise ☐ ☐ ☐ Combustibles / flammables ☐ ☒ ☐ flying debris can hit user	-Supportive closed toe footwear -Work gloves -Eye protection (goggles) -Hearing protection -Shoulder Strap -Dust mask as necessary
	Training / Reference information -Injury prevention orientation -Operators manual -In house training

Note: Signs and symptoms of a musculoskeletal injury (MSI) can include pain, burning, swelling, stiffness, numbness/tingling, and/or loss of movement or strength in a body part. Report these to your supervisor.

Employers must ensure that workers are trained and follow this SAFE Work Procedure

Steps to perform this task safely:

-Consult operators manual for starting, storing and maintenance information

- Wear PPE and shoulder strap before beginning to work with the weed trimmer
- When using the weed trimmer, move your feet to turn with the machine rather than repetitively twisting your back
- Try to angle the trimmer head slightly into the area being cut
- Always use the machine for its appropriate use. Do not try attempt to cut down items larger than is specified in the operators manual
- If area being worked is causing excessive dust, wear a dusk mask
- Take extra care when working in areas where hard debris could be picked up and thrown. Ensure that no one is near enough to be struck by debris
- Let machine cool according to manufacturer guidelines before refilling it with fuel. Always use an appropriate funnel when refilling. Refuel in an area that is level and has adequate ventilation

Training

Workers must be adequately trained. On the job/scenario or demo-based training is useful. Workers should review the operator's manual prior to use. If a worker is involved in an accident, training should be reviewed.

Resources, References, Definitions

https://www.stihl.co.uk/eu-vibration-directive.aspx

Revision History

Revision	Date	Description of Change	Personnel Involved
REV 0	Feb -2020	New SWP	D Yanchula
REV 1	May 2020	Items in bold above	D Hockey, D Borthwick, D Yanchula, J Gruttz, J Bateson
Rev 2	Feb 2023	Changes in BOLD	D Yanchula

SAFE WORK PRACTICE 13 – ANIMAL ENCOUNTERS

SWP Purpose

Much of the work conducted by GDTA workers is in forested and sometimes remote areas of the trails system. The potential to encounter wildlife is high. As the area also encompasses grazing leases for ranging cattle, these animals are also likely to be encountered. The purpose of this SWP is to decrease the potential for animal encounters and to provide guidelines for behavior during an encounter.

Scope

This SWP applies to all GDTA workers who work at camp or on the trails system.

Responsibilities

Responsibilities apply to the Trip Manager/Volunteer Lead, all workers, and the Health and Safety Committee.

It is the responsibility of the Trip Manager/Volunteer Lead to

- Discuss the risks of animal encounters to crew
- Implement the guidelines and controls within this SWP
- Reinforce to workers that any recommended controls must be applied consistently
- Ensure that any animal incident is reported and recorded **via an Incident Report**
- Communicate bear and/or cougar sightings to GDTA Safety Committee

It is the responsibility of the Workers to

- Comply with this SWP and follow manufacturers' instructions
- Ensure recommended controls are implemented and used appropriately.
- Immediately report any concerns or incidents to the Crew Lead, including bear/cougar sightings
- Use controls such as bear spray according to manufacturers' instructions and in a safe manner

It is the responsibility of the Safety Committee to

- Maintain this Safe Work Practice
- Perform periodic audits to assess that these requirements/SWP are being acted upon.
- Reinforce that recommended controls are to be implemented and used appropriately.

Hazards

Hazards from animals include bites, trampling, etc. Potential threats within the GDTA trails system include bears, cougars, moose, or other ungulates (particularly when with young and during rutting), rabid or otherwise sick animals (e.g. fox, coyote), domestic animals such as cattle, horses, or dogs. Almost all animal attacks are the result of surprise encounters.

Controls

Controls may include elimination/substitution, engineering, warnings, administrative, and/or PPE. Guidelines are presented below, grouped by animal type.

Bear

- Check the Kananaskis trail reports for any bear sightings/trail closures; reconsider the job at hand if a bear is in the area
- Volunteer workers should carry bear spray, as well as noise makers such as whistles
- Ensure that the bear spray is not expired, is easily accessible, but secured
- Bear spray should be directed towards the animal's face; be aware of wind direction, so that the spray does not blow back into your own face
- Bear spray is a last resort; do not depend on its efficacy
- In the event of an encounter, administer appropriate first aid treatment; a doctor should treat any animal bites/scratches to prevent infection and possibly test for rabies
- When working in bear country, stay aware of your surroundings
- All bears are individuals and so all bear encounters will be unique. Serious attacks are rare, but you must always be cautious and alert.
- Work together as a group
- When working in areas of dense brush/limited visibility, make noise so that the bear knows where you are and what you are
- Do not approach carcasses
- Watch for/avoid berry patches
- Watch for bear sign (scat, fresh tracks, diggings)
- Do not leave food or garbage in the area
- Never approach a wild animal
- If you see a bear, leave the area
- If you see a bear but the bear doesn't see you -
    - Don't attract attention. Leave the way you came without calling attention to yourself. Retreat slowly while keeping your eye on the bear. Never run.
    - If you must move forward, give the bear a wide berth. If you have no choice but to move forward, give the bear as much space as you can.
    - Stay quiet and alert. Even if you think you are a safe distance away from the bear, remain quiet, alert and calm. Continue watching for the bear until you reach your destination.
- If you see the bear and the bear sees you –
    - Do not run. Stay calm. Stay with your group. Assess the situation
    - Look around. If you see cubs or an animal carcass, the bear will want to protect them. If you see either, back away from them.
    - Prepare to use your bear spray.
    - Back out. Leave the area the way that you came. Keep your eye on the bear without staring at it aggressively.

    - Watch for a place to hide. As you back away, seek out a place of safety, such as a car or building.
    - Speak to the bear in a soft, low voice. Let the bear know that you are human and not a prey animal.
    - Use your noisemaker and prepare to defend yourself with bear spray.
- If you encounter a bear at close range when you're on your bike –
    - Step off your bike and walk slowly away
    - Keep your bike between you and the bear
    - Do not try to outrun or out-cycle the bear
    - Leave the area the way you came if you spot a bear from a distance.
- If the encounter is a defensive one, it occurs when the bear is feeling stressed or threatened. The bear may have been surprised by your sudden appearance or feel that you are a threat to itself, its cubs, or its food source. In such an encounter, the bear may show some of the following behaviors:
    - Vocalizing such as blowing, huffing, "woofing", growling, or snapping its jaws
    - Flicking the ears back
    - Swatting the ground
    - Swaying the head
    - Making a bluff charge
- If this occurs, -
    - Do not run. Stay calm, make no sudden movements, and do not act in a threatening manner.
    - Speak to the bear in a soft, low voice. Speaking calmly to the bear lets it know that you are not a prey animal and helps to keep you calm and focused.
    - Keep the group together.
    - Prepare to use your bear spray.
    - Back away slowly without turning your back to the bear
    - If the bear charges, do not run. Stand your ground. A bear may come very close to you when making a bluff charge, and it may make more than one bluff charge. NEVER run. Remember that bluff charges are made to communicate that you've invaded the bear's space and it wants you to move off. Most of bluff charges are, in fact, bluffs, and do not end with the bear making contact. Shooting the bear out of fear in bluff situations may result in the needless death of a bear.
    - When the bear approaches, use your bear spray –
        - At 9 to 15 m (30 to 50 ft) fire a warning blast for ½ to 1 second, aiming the bear spray slightly downward.
        - At 6 to 9 m (20 to 30 ft) fire 1 to 2-second blasts in continuous succession, aiming slightly downward in front of the bear's head until the bear leaves.
        - At 0 to 6 m (0 to 20 ft) fire 1 to 2-second blasts in continuous succession, aiming at the head, or into the nose and mouth of the bear until the bear leaves.
        - Try to keep some bear spray in reserve. Always re-evaluate your situation

- After spraying the bear, back away. Keep the bear in sight as you leave the area and stay alert. Bears may be attracted to the bear spray residue.
- If the bear does make contact, play dead. Cover the back of your neck with your hands. Lie on your stomach with your legs anchored in the ground. If the bear rolls you over, roll back on to your stomach. Don't move until you're sure the bear has left the area.
- Once the bear has stopped, remain quiet. Yelling at the bear may provoke it into a further attack.
- Defensive attacks are short. If the bear has started to bite or if the attack is prolonged, it may have turned predatory (see below).
- If the bear sees you, is not showing signs of stress and is closing the distance –
    - It may be curious, looking for a handout, attempting to assert its dominance or be assessing you as a potential food source. In these cases, the bear is not showing signs of stress and is
        - Staring intently
        - Circling around you to detect your scent
        - Remaining quiet
        - Approaching in a slow, hesitant manner
        - Keeping its head and its ears up
    - In these kinds of encounters, -
        - Do not run. Prepare to fight with all means at your disposal. Do not play dead in a predatory encounter.
        - Make yourself look big and shout at the bear. Yell aggressively at the bear and stand on a rock or a tree stump to remind the bear that you are not easy prey
        - Use your noisemaker and bear spray. Continue to use your bear spray, even when in close contact with the bear.
        - Pick up rocks or sticks to use as weapons. Aim at the bear's eyes, face, and nose
        - If the bear makes contact, fight back as forcefully as you can.

Moose

- Moose are not normally aggressive. However, a moose that feels threatened, a bull moose in the fall rut, or a cow moose protecting her calves may be easily provoked into an attack.
- Calves may not always be obviously close or may be hidden from view by thick brush. Never come between a cow and its calf.
- An agitated moose may show some of the following behaviors:
    - Neck and back hairs standing up
    - Ears going back against its head
    - Snorting
    - Lip licking
- If you are charged by a moose, run away as fast as you can and try to find a car, tree or building to hide behind. If the moose knocks you down before you reach safety, don't fight - curl up into a ball and cover your head.

- To help prevent a possible confrontation, do not allow your dog to harass the moose and do not try to scare the moose off by yelling or throwing things.
- Never approach moose calves that have been left alone by their mothers. The mother may have temporarily left the calf in a safe spot and may not be too far away. Moose mothers can also be very protective. If she senses that you are too near her calf, she may defend them.

Deer

- Deer are normally timid and quick to flee when people come near. However, deer can become surprisingly aggressive in protecting themselves and their young.
- Always keep your distance from any wildlife. If it appears that the deer won't run away as you approach, walk around the deer – giving it a lot of space – or back away and find another route to your destination.
- Never approach fawns that have been temporarily left alone by their mothers. Their mothers will return, and if they see that you are too close to the fawn, they may attack.
- Collisions between vehicles and deer increase in areas with higher deer populations. These collisions can be very destructive to vehicles and each year result in human fatalities.
- Practice safe driving habits relative to wildlife – commonly deer and moose.
- Reduce speed at night
- Scan the road and ditches ahead for animals, especially when travelling at dawn or dusk.
- Slow down in a curve, when reaching the crest of a hill or in wildlife-populated areas.
- Use high beams when possible. A deer's eyes will glow when they catch light.
- Look for more than one animal – while moose are often solitary, deer travel in groups.
- Brake firmly if an animal is in the vehicle's path. Avoid swerving.
- Honk in a series of short bursts to encourage animals to move out of the way.
- Leave plenty of room when driving around an animal on or near a road – a frightened animal may run in any direction.

Cougars

- Check the Kananaskis trail reports for any cougar sightings/trail closures; reconsider the job at hand if a cougar is in the area
- Be prepared before you leave the trailhead. Discuss wildlife risks and means of controlling that risk. Make an informed plan for how the group will respond if you see a cougar.
- Travel as a group. Cougars are less likely to approach groups of people.
- Make a lot of noise to avoid surprise encounters with cougars, or other wildlife.
- Don't let anyone in the group wander off alone.
- Take your bear spray, air horn, or other noise deterrents; check that bear spray is current/not expired, and that air horn is working. Make sure you know how to use them.
- Keep your bear spray and noise deterrent on your belt or in a chest holster so you can access it quickly.
- Do not take your dogs if there is a cougar in the area; if taking your dog, make sure it is kept close and on a leash at all times.

- Ensure that you have means of communicating for assistance – e.g. cell phone, if there is cell reception; Garmin InReach device; satellite phone.
- Be alert. Always watch for wildlife behind and ahead of you.
- Be extra wary along tree lines, rock outcroppings or under ledges.
- Watch for wildlife and signs (see photos below). Signs that a cougar has recently been in the area include:
    - Tracks, scrapes and fresh kills. Cougars will bury their kills, and the buried kill may be difficult to spot. If you see part of an animal beneath a pile of leaves and grasses, assume you have located a cougar kill and leave the area.
    - Flocks of ravens or magpies may indicate a kill site where either cougars or bears could be found feeding

Cougar Signs

Cougar track in mud ***Buried Kill*** ***Cougar scat (feces) with tracks***



Training

Workers must be adequately trained. Wildlife awareness training for crew leads is recommended, including guidelines for safe use of bear spray. If a worker is involved in an accident, training should be reviewed.

Ensure that there are first aiders with the crew, appropriate to the size of the crew.

Resources, References, Definitions

Staying Safe in Bear Country, training/educational video

Revision History

Revision	Date	Description of Change	Personnel Involved
REV 0	Feb 2020	New SWP	D Yanchula
Rev 1	Feb 2023	Changes in BOLD	D Yanchula

SAFE WORK PRACTICE 14 – SEVERE WEATHER

HACR ID: High Risk for High Winds

SWP Purpose

Severe weather is a considerable hazard when working or recreating in remote backcountry settings where protective shelter may be unavailable. This section deals with summer storms featuring high winds, heavy rain, hail, and lightning. Risk management does nor ensure safety but by understanding these natural forces and taking appropriate actions, we can reduce the chance of harm.

Scope

This SWP applies to all GDTA workers who work at the trailhead or on the trails system.

Responsibilities

Responsibilities apply to the Trip Manager/Volunteer Lead, all workers, and the Health and Safety Committee.

It is the responsibility of the Trip Manager/Volunteer Lead to

- Discuss the weather-related forecast risks for the day and adjust the work day accordingly.
- If severe weather builds unexpectedly, the crew leader is expected to assess the situation to determine whether there is time to either seek shelter or begin a rapid evacuation.
- Implement the guidelines and controls within this SWP
- Reinforce to workers that any recommended controls must be applied consistently
- Communicate, report, and record any injury, incident, or near-miss to GDTA Safety Committee

It is the responsibility of the Workers to

- Comply with this SWP and follow the instructions given by the Crew Lead/ Volunteer Leader
- Ensure recommended controls are implemented and used appropriately.
- Immediately report any concerns or incidents to the Crew Lead.

It is the responsibility of the Safety Committee to

- Maintain this Safe Work Practice
- Perform periodic audits to assess that these requirements/SWP are being acted upon.
- Reinforce that recommended controls are to be implemented and used appropriately.

Hazards

Severe summer storm hazards have been broken into 4 distinct characteristics that may occur alone or concurrently. They are high winds, hail, heavy rain, and lightning.

Controls

Controls may include elimination/substitution, engineering, warnings, administrative, and/or PPE. Guidelines are presented below, grouped by weather characteristic type. It is prudent that the Crew Leader researches the weather forecast for the day before finalizing their work plan.

High Winds

- High winds are especially dangerous in forested areas where trees may be wind thrown and branches broken off. This is especially prevalent in West Bragg Creek where high wind events are experienced year-round and blow down cleanup is a common trail maintenance activity.
- Using the Beaufort Wind Force Scale as a guide, the Crew Leader will cease trail work in wooded areas when Level 7 is observed.
- There will be an organized withdrawal from any treed areas.

Beaufort Wind Force Scale for Tree and Forest work

0	Calm	0-1 mph	No wind
1	Light Air	1-3 mph	Smoke drifts gently
2	Light Breeze	4-7 mph	Leaves rustle a little
3	Gentle Breeze	8-12 mph	Twigs and small branches move
4	Moderate Breeze	13-18 mph	Branches moving
5	Fresh Breeze	19-24 mph	Small trees sway
6	Strong Breeze	25-31 mph	Umbrellas difficult to use
7	Near Gale	32-38 mph	Whole trees sway
8	Gale	39-46 mph	Branches off trees
9	Strong Gale	47-54 mph	Tiles come off roofs
10	Storm	55-63 mph	Trees blown down

Safe **Warning - use caution** **Danger**

Hail

- Hail storms have the potential to cause serious bodily harm and extensive property damage.
- Seek shelter immediately. Using trees should be a last resort if lightning is associated with the storm. Falling tree debris may also become a hazard.
- Put on a hard hat or bike helmet if available.
- Put on safety eyewear if available
- Find something like a pack to protect your head and body.
- Stay out of lowland areas that may suddenly fill with water.

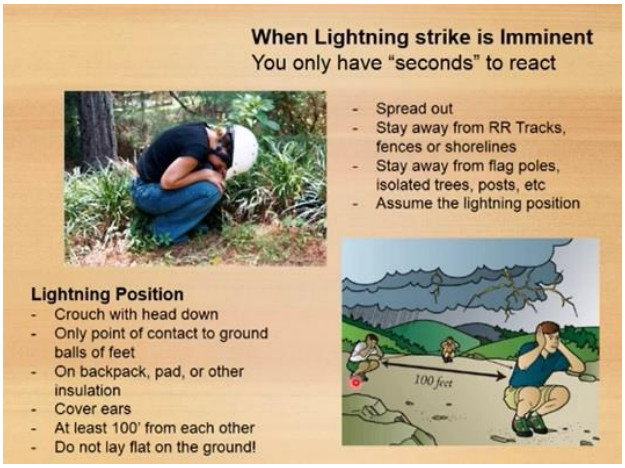
Heavy Rain

- Besides the obvious inconvenience of getting wet there are other potential hazards resulting from this weather event. They include:

- Hypothermia
- Slippery trail conditions
- Destabilized trails and bridge abutments
- Flooding with compromised egress
- Mud slides

- It is prudent that all trail crew carry rain gear in their personal packs. Mountain weather is infamous for changing rapidly and without warning.
- Stay alert for signs of hypothermia. (Shivering, compromised motor function, decreased alertness)

Lightning

- Backcountry travel during a lightning storm can be a truly harrowing experience. Not having shelter available leaves you exposed and vulnerable to lightning strike. There are some things you can do to minimize your potential to attract a strike.
- It is important to note that it doesn't have to be raining or even cloudy overhead for you to be in danger of a lightning strike.
- When you hear thunder approaching it is time to head to shelter or lower ground. Avoid ridge tops and outcrops.
- Look for depressions that will put you lower than the surrounding ground. Be alert for flooding potential.
- Avoid trees because they are taller than their surroundings and attract strikes. If you need to move through the forest while seeking safer terrain, stay away from tree trunks as you move.
- Avoid open areas that are 100 meters wide or more as you may become the lightning rod.
- If you are carrying tools put them on the ground.
- If the storm overruns you get into the lightning position.
  - 

- First Aid for lightning strike victims:
  - You may have to wait until the storm passes to safely begin assessing patients.
  - Refer to Emergency Preparedness Plan for emergency contacts if assistance is required.

- Reverse triage – resuscitate the apparent dead who don't have lethal injuries as a priority. Most times the heart will restart after the electrical insult however the breathing center of the brain may take longer to respond. Prolonged artificial respiration or CPR may be needed to prevent brain damage from lack of oxygen. Recovery rates are high.
- Treat the trauma which may include burns and fractures.
- Prepare to evacuate patient(s).

Training

- Crew leaders will receive training in assessing hazardous weather conditions and plan their work days according to predicted weather forecasts. First aid for environmental injuries is covered in the Standard First Aid and Wilderness First Aid Curriculum.

Resources, References, Definitions

Environment Canada, NOLS

Ensure that there are first aiders with the crew, appropriate to the size of the crew.

Revision History

Revision	Date	Description of Change	Personnel Involved
REV 0	Feb -2020	New SWP	D Yanchula
REV 1	May 2020	Added lightning reference material from OSHA and NOAA	D Yanchula
Rev 2	Feb 2023	Reviewed – No change	D Yanchula

SAFE WORK PRACTICE 15 – WORKING AROUND MOBILE EQUIPMENT

SWP Purpose

Trail-building and maintenance work occasionally requires the use of mini-excavators or wheeled/tracked hoes, to excavate ditches/drainages and/or install culverts. Crews may work in the vicinity. This SWP is a guide to working safely around these types of mobile equipment. Unsafe practices may lead to injury, fatality, property damage and/or environmental damage.

Scope

This SWP applies to all GDTA workers who work near mobile equipment. Examples of mobile equipment include rubber-tired or tracked backhoes, excavators (including mini-excavators), bobcats, fork lifts.

Responsibilities

Responsibilities apply to the Trip Manager/Volunteer Lead, all workers, and the Health and Safety Committee.

It is the responsibility of the Trip Manager/Volunteer Lead to

- Discuss the hazards and controls to crew/workers
- Implement the guidelines and controls within this SWP
- Reinforce to workers that any recommended controls must be applied consistently
- Ensure that any near miss or incident is reported and recorded

It is the responsibility of the Workers to

- Understand the potential hazards of working around mobile equipment
- Comply with this SWP
- Inspect the work area/situation regularly for hazards
- Workers will not operate any mobile equipment themselves unless properly trained to do so

It is the responsibility of the Safety Committee to

- Maintain this Safe Work Practice
- Perform periodic audits to assess that these requirements/SWP are being acted upon.
- Reinforce that recommended controls are to be implemented and used appropriately.

Hazards

Hazards are specific to each type of mobile equipment and these should be assessed/evaluated prior to work, including discussion of how to control/mitigate the risks. As noted above, no worker will operate any mobile equipment without proper training. Trained operators will use only those pieces of equipment specific to their training. All equipment should be used only for those purposes/tasks for which they were designed.

Potential hazards related to working near mobile equipment include but are not limited to:

- Operation at an improper speed
- Loss of control of steering
- Loss of traction
- Slope/trench/ditch wall failure due to vibration, weather/sediment conditions, and/or weight of machine
- Operator error
- Unstable/lost load or exceeding load capacity
- Hydraulic failure
- Standing in a blind spot during machine backing/repositioning
- Operation on a steeper grade than is specified operating parameter for the machine
- Lack of or unclear communication between operator and crew
- Standing in boom swing area or blind spot
- Contact with overhead wires, trees, or other hazards

Controls

Administrative controls as well as appropriate PPE are applied to mitigate risk.

Appropriate PPE should be worn, including –

- Safety glasses
- Hearing protection that allows detection of warning signals
- Safety footwear

Administrative controls include the following –

- Conduct an Alberta 1-call and/or third-party line locate prior to excavation
- Evaluation and mitigation of risks through a field-level risk assessment, discussion through tailgate meetings
- Maintain awareness of surroundings, including not only the machine, but overhead hazards, changing conditions (weather, terrain), tripping hazards, etc.
- Maintaining focus on the task at hand
- Flagging or fencing the work area to create an exclusion zone
- Storing items (personal, field gear, etc.) well away from the work area
- Developing clear communication with the operator, including hand signs, two-way radios, etc.
- Never walk under a load or boom/bucket, even when the equipment is off
- Never approach the machine until the operator has made eye contact, lowered the boom/bucket, and preferably shut off the machine
- Do not approach the machine from the rear, as you may be entering a blind spot
- Never ride in the bucket, either across terrain or into trenches
- Follow the SWP guidelines for safe fueling of engines
- Machines should be well-maintained and inspected prior to daily use

- Machines should be equipped with an audible signal to indicate that it is backing up (backup alarm)
- Stopped/parked mobile equipment should be immobilized by blocking wheels, putting it in gear, applying parking brake.
- Never leave an elevated load unattended, even when machine is turned off
- Operate the machine within safe parameters as per operator's manual/manufacturer's specifications

Training

Workers must be adequately trained. Mobile equipment may only be operated by trained, qualified, competent workers. Workers in the vicinity of the equipment must read and understand this SWP and take part in a hazard identification and evaluation. If a worker is involved in an accident, training should be reviewed.

Resources, References, Definitions

Revision History

Revision	Date	Description of Change	Personnel Involved
REV 0	Feb 2020	New SWP	D Yanchula
Rev 1	Feb 2023	Reviewed – No change	D Yanchula

SAFE WORK PRACTICE 16 – WORKING ALONE IN THE TRAILS SYSTEM

SWP Purpose

Much of the work conducted by GDTA workers is in forested and sometimes remote areas of the trails system. Trail maintenance alone includes increase risks if they are injured or of animal encounters. Working alone on the trail is not recommended and is to be avoided where possible. Trail maintenance under summer conditions includes risks of working alone relative to animal encounters. The SWP purpose is to mitigate risks to workers when working alone on the trails system.

Scope

This SWP applies to all GDTA workers who work alone on the trails system, in remote areas.

Responsibilities

Responsibilities apply to the Trip Manager/Volunteer Lead, all workers, and the Health and Safety Committee.

It is the responsibility of the Trip Manager/Volunteer Lead to

- Discuss the risks of working alone with workers
- Implement the guidelines and controls within this SWP
- Reinforce to workers that any recommended controls must be applied consistently

It is the responsibility of the Workers to

- Comply with this SWP and participate in risk assessment around working alone
- Ensure recommended controls are implemented and used appropriately.
- Immediately report any concerns or incidents to the Crew Lead
- Maintain regular communication while working alone
- Work with a buddy or in a group where possible including walking back to camp. This is not only for safety reasons but also to minimize wildlife encounters.

It is the responsibility of the Safety Committee to

- Maintain this Safe Work Practice
- Perform periodic audits to assess that these requirements/SWP are being acted upon.
- Reinforce that recommended controls are to be implemented and used appropriately.

Hazards

Any risks or hazards of work are accentuated when working alone, as the support of other workers/crew if an incident occurs is absent. Communication is key to reducing risk for isolated workers in remote settings.

Controls

Controls may include elimination/substitution, engineering, warnings, administrative, and/or PPE.

- High risk tasks **shall not** be conducted alone. **It is up to the Trip manager's discretion based on assessment of risk and workers experience level.**
- Carry the most reliable communication equipment. Consider carrying one primary means of communication and one back-up.
- Inspect and conduct a test run of all communication equipment prior to leaving the trailhead.
- Ensure that you have communicated to others where you are going, when you should be expected to return
- Establish a check-in system for updating a worker's status while working alone
- Consider consequences of a "worst case scenario" while assessing the risk of a specific task and err on the side of caution

Training

Workers must be adequately trained. All workers who are working alone should have up to date/valid first aid training.

Resources, References, Definitions

Revision History

Revision	Date	Description of Change	Personnel Involved
REV 0	Feb -2020	New SWP	D Yanchula
REV 1	May 2020	See bold sections – no working alone for high risk activities	D Yanchula, D Hockey, J Gruttz, D Borthwick
Rev 2	Feb 2023	Reviewed – No change	D Yanchula

SAFE WORK PRACTICE 17 – WORKING IN COLD ENVIRONMENTS

SWP Purpose

Trail-building and maintenance work may be conducted under cold conditions. However, the most common work conducted in cold temperatures is trail maintenance. Working in cold temperatures can result in injury, while working in extreme cold temperatures can result in fatality. The purpose of this SWP is to identify and control potential hazards due to work in cold temperatures.

Scope

This SWP applies to all GDTA workers who work in cold conditions, in which the temperature is sufficiently severe to create hazards to workers and negatively affect equipment operation.

Responsibilities

Responsibilities apply to the Trip Manager/Volunteer Lead, all workers, and the Health and Safety Committee.

It is the responsibility of the Trip Manager/Volunteer Lead to

- Discuss the risks of working in cold temperatures with workers/crew
- Implement the guidelines and controls within this SWP
- Reinforce to workers that any recommended controls must be applied consistently

It is the responsibility of the Workers to

- Comply with this SWP
- Ensure recommended controls are implemented and used appropriately.
- Immediately report any near misses or incidents to the Crew Lead
- Operate equipment within the temperature ranges indicated in manufacturers operating specifications

It is the responsibility of the Safety Committee to

- Maintain this Safe Work Practice
- Perform periodic audits to assess that these requirements/SWP are being acted upon.
- Reinforce that recommended controls are to be implemented and used appropriately.

Hazards

Wind chill is a combined effect of air temperature and wind on exposed skin. The wind chill index relates wind and temperature to its effect on exposed skin at 5 feet of elevation. Environment Canada will issue wind chill advisories, warnings, and alerts when weather conditions are notably hazardous. As wind chill increases, risks to the body increase, with rapid cooling of the body leading to potential for serious medical conditions and even death. The most serious concern is the risk of hypothermia or dangerous overcooling of the body. Another serious effect of cold exposure is frostbite or freezing of the

exposed extremities such as fingers, toes, nose, and ear lobes. Hypothermia could be fatal in absence of immediate medical attention.

Wind chill warnings in Alberta are issued when there is a wind speed of 15 km/h or more and a wind chill of – 40 and these conditions are expected to last for 3 hours or more.

Most workplaces are not equipped to accurately measure wind speed and air temperature. Workers should refer to local weather reports. Environment Canada offers a free on-line calculator that determines the wind chill value – all you need is the wind speed and temperature. The Environment Canada web site is http://www.ec.gc.ca/meteo-weather/default.asp?lang=En&n=0F42F92D-1.

Controls

Controls may include elimination/substitution, engineering, warnings, administrative, and/or PPE.

- Be prepared – check the Environment Canada weather conditions when planning work, when leaving for work; if conditions are hazardous, consider postponing work tasks until conditions improve
- Dress for the temperature, wind chill, and overall conditions. Work in open areas with high wind will require different preparations than working in sheltered, forested areas.
- Discuss hazards with crew members
- Ensure that the correct number of first aiders are with the crew
- Ensure that emergency communication devices are available and operational – note that some devices do not operate well or at all in cold temperatures (e.g. cell phones)
- Be familiar with signs of cold stress, including
    - Reduced dexterity and increasing numbness of extremities (hands, feet)
    - Impaired ability to sense heat, cold, pain
    - Reduced joint flexibility
    - Reduced grip strength
    - Hypothermia
    - Frostbite
    - Reduced coordination
    - Reduced rational, decision-making capacity
- Be aware that clothing worn for protection against cold may have its own safety hazards. Hats, hoods, balaclavas may limit capacity to hear and see
- Bulky clothing restricts free movement
- Gloves and mittens limit dexterity and sensation
- Footwear may be bulky and oversized, resulting in difficulties in using vehicle controls/pedals
- Added bulk and weight increases the amount of effort required to move, resulting in faster rate of fatigue/exhaustion
- Hypothermia and frostbite occur gradually; be aware of how you feel and check other crew members
- When working in cold temperatures, limit the length of exposure and ensure that warm areas are available for rest breaks (e.g. truck cab, trails center)

- Dehydration in the cold is a risk, which increases the risk of hypothermia; drink warm fluids
- Symptoms such as severe shivering, excessive fatigue, drowsiness, irritability are signs to return to warmth/shelter
- Appropriate clothing is a critical control; wear appropriate clothing to maximize warmth while working; layer clothing
- The CCOHS table below provides guidelines for length of exposure under variable cold conditions.

Work/Warm-up Schedule for Outside Workers based on a Four-Hour Shift

Air Temperature - Sunny Sky		**No Noticeable Wind**		**Wind 8 km/h (5 mph)**		**Wind 16 km/h (10 mph)**		**Wind 24 km/h (15 mph)**		**Wind 32 km/h (20 mph)**	
°C (approx)	°F (approx)	Max. work Period	No. of Breaks**	Max. Work Period	No. of Breaks	Max. Work Period	No. of Breaks	Max. Work Period	No. of Breaks	Max. Work Period	No. of Breaks
-26° to -28°	-15° to -19°	(Norm breaks) 1		(Norm breaks) 1		75 min.	2	55 min.	3	40 min.	4
-29° to -31°	-20°to -24°	(Norm breaks) 1		75 min.	2	55 min.	3	40 min.	4	30 min.	5
-32° to -34°	-25°to -29°	75 min.	2	55 min.	3	40 min.	4	30 min.	5	Non-emergency work should cease	
-35° to -37°	-30° to -34°	55 min.	3	40 min.	4	30 min.	5	Non-emergency work should cease			
-38° to -39°	-35° to -39°	40 min.	4	30 min.	5	Non-emergency work should cease					
-40° to -42°	-40°to -44°	30 min.	5	Non-emergency work should cease							
-43° & below	-45° & below	Non-emergency work should cease									

Training

Workers must be adequately trained. Ensure that the appropriate number of first aiders are on site.

Resources, References, Definitions

The Environment Canada wind chill chart is included below:

Environment Canada Wind Chill Chart

Actual Air Temperature T_{air} (°C)

Wind Speed $V_{10\ m}$ (km/h)	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45	-50
5	4	-2	-7	-13	-19	-24	-30	-36	-41	-47	-53	**-58**
10	3	-3	-9	-15	-21	-27	-33	-39	-45	-51	**-57**	**-63**
15	2	-4	-11	-17	-23	-29	-35	-41	-48	-54	**-60**	**-66**
20	1	-5	-12	-18	-24	-30	-37	-43	-49	**-56**	**-62**	**-68**
25	1	-6	-12	-19	-25	-32	-38	-44	-51	**-57**	**-64**	**-70**
30	0	-6	-13	-20	-26	-33	-39	-46	-52	**-59**	**-65**	**-72**
35	0	-7	-14	-20	-27	-33	-40	-47	-53	**-60**	**-66**	**-73**
40	-1	-7	-14	-21	-27	-34	-41	-48	-54	**-61**	**-68**	**-74**
45	-1	-8	-15	-21	-28	-35	-42	-48	**-55**	**-62**	**-69**	**-75**
50	-1	-8	-15	-22	-29	-35	-42	-49	**-56**	**-63**	**-69**	**-76**
55	-2	-8	-15	-22	-29	-36	-43	-50	**-57**	**-63**	**-70**	**-77**
60	-2	-9	-16	-23	-30	-36	-43	-50	**-57**	**-64**	**-71**	**-78**
65	-2	-9	-16	-23	-30	-37	-44	-51	**-58**	**-65**	**-72**	**-79**
70	-2	-9	-16	-23	-30	-37	-44	-51	**-58**	**-65**	**-72**	**-80**
75	-3	-10	-17	-24	-31	-38	-45	-52	**-59**	**-66**	**-73**	**-80**
80	-3	-10	-17	-24	-31	-38	-45	-52	**-60**	**-67**	**-74**	**-81**

where
T_{air} = Actual Air Temperature in °C
$V_{10\ m}$ = Wind Speed at 10 metres in km/h (as reported in weather observations)

Notes:

1. For a given combination of temperature and wind speed, the wind chill index corresponds roughly to the temperature that one would feel in a very light wind. For example, a temperature of -25°C and a wind speed of 20 km/h give a wind chill index of -37. This means that, with a wind of 20 km/h and a temperature of -25°C, one would feel as if it were -37°C in a very light wind.
2. Wind chill does *not* affect objects and does *not* lower the actual temperature. It only describe how a human being would feel in the wind at the ambient temperature.
3. The wind chill index does *not* take into account the effect of sunshine. Bright sunshine may reduce the effect of wind chill (make it feel warmer) by 6 to 10 units.

Frostbite Guide
Low risk of frostbite for most people
Increasing risk of frostbite for most people within 30 minutes of exposure
High risk for most people in 5 to 10 minutes of exposure
High risk for most people in 2 to 5 minutes of exposure
High risk for most people in 2 minutes of exposure or less

CCOHS Fact Sheet on cold temperature conditions:
http://www.ccohs.ca/oshanswers/phys_agents/hot_cold.html

Revision History

Revision	Date	Description of Change	Personnel Involved
REV 0	Feb 2020	New SWP	D Yanchula
Rev 1	Feb 2023	Reviewed – No change	D Yanchula

SAFE WORK PRACTICE 18 – USING A CHAINSAW

HACR ID: High Risk for Chain Saw Use

SWP Purpose, Introduction

Chainsaws are used frequently in both trail building and maintenance, to clear trees & branches from new or existing trails. These are dangerous tools even when properly used, as a minor error in judgment or a missing step in the process can lead to serious injury or fatality. This safe work practice (SWP) is intended to help workers in using chainsaws, if necessary.

Training

Only volunteers with valid certifications are permitted to use chainsaws when working for the GDTA. These certifications must be presented to the GDTA for its records. A training program emphasizing hazard awareness and mitigation has been adopted by the GDTA for its workers/volunteers. **New GDTA volunteers should be paired with experienced GDTA chain saw volunteers (shadowing) to assess skills level and adherence to safety procedures.**

The use of chainsaws by volunteers will be limited to tasks to which their level of training has prepared them for. All chainsaw operators are required to have a qualification in chainsaw safety that is recognized by the industry. Accredited providers of chainsaw safety courses include Arboriculture Canada, Woodland Trainers Association and the BC Forest Safety Council.

A synopsis of the course offered by the GDTA for its volunteers, Arboriculture Canada's 'Chainsaw Safety
and Cutting Techniques' is as follows:
Chainsaws are one of the most useful as well as potentially dangerous tools a worker can use. This course is designed to educate personnel who use a chainsaw about safety, maintenance, use and handling. Participants will gain an understanding in what contributes to accidents and how to avoid them. Hands on and practical work planning strategies, including bucking and limbing, understanding compression and tension and dealing with spring poles will be coached and practiced in this course. Notching and back cutting will be introduced for small tree felling on trees of 6" DBH or smaller. There is a strong focus on personal safety, risk assessment and accident prevention. Training workers and developing skills that reduce variables and mitigate risks associated with chainsaws and cutting techniques is the general theme of this course.

A chainsaw operator must have completed the Arboriculture Canada course "Hazard and Danger Tree Cutting and Falling" to perform any of the following tasks:

a) fell trees that exhibit defects, cavities or decay
b) fell trees that are hung or snagged
c) freeing spring poles
d) felling where mechanical advantage is required

Work site safety and hazard assessment

No work will take place until a Safety Tailgate Meeting has taken place and all site-specific hazards have been identified, discussed, and mitigated. An Emergency Response Plan and signaling system is an essential part of the work plan.

• The Trail Crew Leader will constantly evaluate chainsaw operations and potential hazards. Mentoring of newly trained volunteers will be an essential component of GDTA operations.

• All non-chainsaw workers assigned to assisting in clearing activities must go through an orientation on working safely around felling and bucking operations.

• Trail closures will be mandatory for the period of time that tree felling and clearing is occurring to eliminate the risk to the public. Warning signage and spotters will be used to maintain a closed work site. **NOTE: signage and spotters shall be posted at both ends of an "active trail" to maintain the closed work site and protect hikers.**

Felling Specific Requirements

A six-step felling plan must be in place addressing the following:

1. Risk Assessment (Inner and outer perimeter survey and red flag indicators)
2. Height, lean, slope assessment
3. Confirmation that the following are present: PPE, Axe, Wedges, Blood stopper, Whistle, First Aid kit
4. Escape Route **– including signage to block off trail within 100 feet both directions**
5. Notch plan
6. Back cut plan

• Open Face notch is usually the notch of choice. 70 degree angle is cut from the top of the notch with the width of the notch apex being 80% of the diameter of the tree. Hinge thickness should end up being 5-10% of the diameter of the trunk after the back cut is placed.

• The back cut should be level or slightly above the notch apex.

• No one other than the feller should be within 1.5 x the height of the tree measured from the stump if on level ground.

Scope

This SWP applies to any worker who may be required to fell a tree or remove branches using a chainsaw or who is part of a team assisting in felling. These workers will be required to review this SWP prior to tree felling/branch removal activities.

Responsibilities

Responsibilities apply to the **Trip Manager**/Volunteer Lead, all workers, and the Health and Safety Committee.

It is the responsibility of the **Trip Manager**/Volunteer Lead to

- Communicate to workers the hazards involved in these tasks.
- Reinforce to workers that only fully qualified, certified and approved individuals may operate a chainsaw.
- **Assess, or delegate the assessment to experienced GDTA Chain saw volunteers, for new chainsaw volunteers' chainsaw skills and adherence to safety procedures.**
- Require that this SWP be implemented for all job sites.

It is the responsibility of the Workers to

- Be aware of the potential hazards that may be encountered during felling and limbing work.
- Ensure the correct equipment is appropriately used.
- Ensure the correct equipment is properly maintained.
- Be familiar with, understand, and consistently apply knowledge of manufacturer's instructions.
- Inspect equipment and work site regularly for hazards.
- Know how to control and respond to hazards and emergencies including use of emergency equipment.
- Promptly communicate possible hazards to other workers at work site; everyone at the work site is responsible for crew safety.
- Immediately report any safety occurrence to the Crew Lead.

It is the responsibility of the Safety Committee to

- Maintain this Safe Work Practice
- Perform periodic audits to assess that these requirements/SWP are being acted upon.
- Reinforce that recommended controls are to be implemented and used appropriately.
- Ensure that chainsaws are properly and regularly maintained, as per manufacturer's instructions.
- Ensure that the manufacturer's instructions are available. (Typically located in camp).

Hazards

Hazards may be due to environmental conditions such as weather (precipitation, temperature, wind).

Hazards may also be due to poorly maintained chainsaws or selection of an inappropriate chainsaw.

Hazards due to worker behavior include psychological factors such as stress, lack of familiarity with the equipment and/or task at hand. Hazards may be due to lack of appropriate, well-maintained PPE.

Hazards may include kickback (strains, sprains) as well as cuts, lacerations, or amputations.

Hazards may include the falling trees or parts of these trees.

Hazards may include projectiles or dirt thrown by the chain.

Controls

Controls may include elimination/substitution, engineering, warnings, administrative, and/or PPE.

Chainsaw work must be done within the restrictions of an individual's certification level. Under no circumstances will an operator use a chainsaw in a manner not covered by the operator's certification.

Complete PPE – including helmet, earmuffs, face shield, gloves, safety pants and boots must be worn always during chain saw operation. All PPE must be CSA certified and in full working order. Volunteers witnessing unsafe chainsaw practice are obliged to report their concerns to Volunteer Leaders and potentially refuse work as outlined in Section 1.3.

- The most important control is training. Only qualified individuals will be permitted to use chainsaws.
- Take frequent breaks when operating a chainsaw
- All chainsaw operators must wear the following CSA approved PPE:
    - Hard Hat/Helmet meeting ANSI Z89.1 standards
    - Safety Glasses and Face Shield
    - Hearing Protection of at least 24 dBA of attenuation
    - Chaps/Chainsaw-resistant Pants. **Chain saw pants are recommended for felling trees**
    - Gloves
    - CSA-approved Steel/composite-toed full leather work boots that extend past the ankle or higher
- The use of anti-vibration gloves during chainsaw operation is recommended.
- Inspect PPE prior to use.
- Inspect the chainsaw prior to use; check for loose or missing components.
- The chainsaw must be inspected frequently and removed from service immediately if any defects are evident.
- All power chainsaws must be equipped with
    - a chain that minimizes the risk of kick back
    - a front handle guard
    - a throttle control lockout

    - anti-vibration mounts
    - a rear hand guard
    - a chain catcher
    - a spark arrestor
    - a sprocket-nose guide bar
    - an on/off switch
- The engine shall not be started until the saw is in the immediate work area, except when a warm-up period is required at which time the saw shall not be left unattended.
- Test the chain brake by activating prior to felling/limbing.
- The work area must be cleared of obstructions to eliminate hazards.
- Before beginning the cut, the operator must plan an escape route.
- Only the operator will be permitted to be within a radius of 3 m of a one-person chainsaw, when operating.
- Consider if signage or flagging is required to ensure that non-workers and/or non-operators do not enter the work area.
- The chain must not be adjusted while the saw is running.
- The operator must always be aware of the consequences of any cut before it is made.
- Chainsaws shall not be operated for cuts above shoulder level.
- Shut off the engine before moving the saw from one location to another, except when trees are in close proximity and the approach is unobstructed. Ensure that this is the case before moving towards the next tree.
- When moving from tree to tree in proximity, apply the chain brake.
- Cool a hot chainsaw for 2 – 3 minutes prior to refueling. Always place a hot saw on a log, stump or on bare ground or other non-flammable surface; not in dry litter or slash.
- Smoking, open flame, or other sources of ignition (e.g. sparks) are prohibited within 3 m of the refueling area.
- Ensure that appropriate first aid kit is available and that at least one worker on site is certified
- Ensure that communication is available in case of incident – i.e. SPOT device, satellite phone, radio, cell phone (only if reception reliable).
- Guard the chain when the chainsaw is being stored or carried long distances.
- A one-person power saw must be carried at the worker's side with the guide bar pointed to the rear; two workers must carry a 2-person power saw.
- When not in use, turn off the saw and place it in a location where it is clear of the work area, is not a tripping hazard, and will not be damaged by falling trees/limbs.
- Eye protection is required when refueling

Tree Felling Best Practices

- Do not fell trees onto lodged trees
- Do not climb lodged trees

- Do not work directly underneath or within striking distance of a lodged tree
- Do not turn your back to a falling tree
- Watch for dead limbs and other objects falling from felled trees.
- Monitor a felled tree as it strikes the ground, as the butt portion may move towards the operator.
- Ensure that the tree has completely settled and adjacent trees are secure before moving in to remove rigging, start bucking, etc.
- Notches should be used for all trees > 13 cm in diameter at breast height (DBH)
- Inspect tree prior to felling for
    - Rot
    - Lean
    - Insect damage
    - Foreign bodies such as staples, wires, etc.
    - Structural deficiencies, decay, cavities, cracks, splits, etc.
    - Broken tops
    - Dead limbs
- Inspect the hazard area prior to felling. The Hazard Area is the intended falling path of the tree. Inspect for
    - Terrain including ground conditions, slope
    - Dead trees
    - Overhead utilities
    - Pedestrian and vehicular traffic
    - Workers
    - Equipment (e.g. quads)
    - Climatic conditions/wind/snow loading, etc.
    - Tripping hazards
- Set rigging equipment if required.
- Know which notch to use to obtain the safest falling; consider
    - Lean of tree
    - Wind
    - Potential targets
    - Condition of tree
    - Size of tree
    - Length of chainsaw bar
- Set notch in accordance with notch used, ensure that notch direction is in the correct location, and inspect the notch for tree condition (e.g. rot, decay, cavity).
- Determine location of back cut and communicate to other workers your intention to perform the back cut
- Perform the back cut; if tree falls in a direction other than what was intended, saw operator must leave the area by the pre-determined escape route.
- Know how to deal with spring poles, if trained to do so

- Bowed trees and uprooted trees are under tension and can be dangerous to the operator
- Leaners may fall prematurely
- Burned trees are unstable and are often hollow, very hard/brittle, and abrasive to cut
- Oversize trees require the use of proper techniques so as not to pinch the saw; if the saw becomes bound in a cut, the priority is the safety of the operator. Leave all equipment behind and focus on your safety.
- Snags cannot be felled safely

Resources, References, Definitions

Arborist Safe Work Practices, Third Edition, 2011:
http://www.wsps.ca/WSPS/media/Site/Resources/Downloads/arborist_manual_3rd_edition_final2.pdf

Revision History

Revision	Date	Description of Change	Personnel Involved
REV 0	Feb 2020	New SWP	D Yanchula
REV 1	Apr 2021	New volunteer assessment, HACR high risk Signage both ends of trail	D Yanchula

SAFE WORK PRACTICE 19 – USING CLEANING SOLVENTS & OTHER FLAMMABLES

SWP Purpose

The purpose of this SWP is to establish written guidelines for using solvents safely, to reduce risk of injury to the user and others in the vicinity.

Scope

All GDTA workers will comply with the guidelines in this SWP and manufacturers' instructions/MSDS.

Responsibilities

Responsibilities apply to the Trip Manager/Volunteer Lead, all workers, and the Health and Safety Committee.

It is the responsibility of the Trip Manager/Volunteer Lead to

- Comply with this SWP and ensure that workers are following manufacturers' instructions/MSDS
- Be sure that all workers who use these materials have been instructed in their proper use and any hazard they pose.
- Reinforce to workers that any recommended controls must be applied consistently
- Require that this SWP be implemented
- Be aware of all solvents/flammables that are used on the job

It is the responsibility of the Workers to

- Comply with this SWP and follow manufacturers' instructions/MSDS
- Follow recommended controls consistently
- Ensure recommended controls are implemented and used appropriately.
- Immediately report any concerns or incidents to the Crew Lead

It is the responsibility of the Safety Committee to

- Maintain this Safe Work Practice
- Perform periodic audits to assess that these requirements/SWP are being acted upon.
- Reinforce that recommended controls are to be implemented and used appropriately.

Hazards

Cleaning solvents are used in day-to-day construction work to clean tools and equipment. Special care must be taken to protect volunteers from hazards, which may be created from the use of these liquids. Wherever possible, solvents should be non-flammable and non-toxic.

Controls

Controls may include elimination/substitution, engineering, warnings, administrative, and/or PPE. Guidelines are presented below. Additional SWP examples are included, following.

- Use non-flammable solvents for general cleaning.
- When using flammable liquids, make sure that no hot work is carried out in the area.
- Store flammables and solvents in secure storage areas.
- Ensure understanding of the nature of the toxic hazards of all solvents before use. (MSDS)
- Provide adequate ventilation
- Use goggles or face shields to protect the face and eyes from splashes or sprays.
- Use rubber gloves to protect the hands.
- Wear protective clothing to prevent contamination of clothes.
- When breathing hazards exist, use the appropriate respiratory protections.
- Never leave solvents in open tubs or vats – return them to storage drums or tanks.
- Ensure that proper containers are used for transportation, storage, and field use of solvents/flammables.
- Where solvents are controlled products, ensure all employees using, or in the vicinity of use or storage, are trained and certified in the Workplace Hazardous Materials Information System. Ensure all WHMIS requirements are met.

Training

Workers must be adequately trained. On the job/scenario or demo-based training is useful. Workers should review the manufacturer's instructions & MSDS prior to use. If a worker is involved in an accident, training should be reviewed.

Resources, References, Definitions

Revision History

Revision	Date	Description of Change	Personnel Involved
REV 0	Feb 2020	New SWP	D Yanchula
Rev 1	Feb 2023	Reviewed – No change	D Yanchula

SAFE WORK PRACTICE 20 – ATV/UTV USE

Following are the GDTA Rules for ATV/**UTV** use:

- **Only workers/volunteers who have taken a recognized ATV or UTV safety course are permitted to operate an ATV or UTV.**
- Workers/volunteers must have signed the GDTA Volunteer Agreement on ATV **or UTV** Use.
- Valid registration must be on the ATV **or UTV** at all times.
- ATV **and UTV** operators and passengers must wear the following PPE –
    - CSA/DOT approved motorcycle helmet (not bicycle helmet), face shield or safety glasses, long pants, gloves, above ankle boots
    - Operators must carry one or more of the following communications devices: Satellite Communication Device (e.g. SPOT, InReach, Cerberus, etc.), Satellite phone, cellphone.
- The T-CLOC Pre-Ride Inspection Checklist must be completed before starting the machine. See Appendix 10.
- Safe operating practice – as outlined in the Canadian Safety Council Student handbook for ATV **and UTV** use – must be displayed at all times (https://canadasafetycouncil.org/workplace-safety/train-trainer)
- Any equipment breakdowns or malfunctions must be reported to the Crew Leader
- Workers operating an ATV **or UTV** must agree to participate in the GDTA maintenance and repair program for the ATV **or UTV**, unless it is rented.
- Under no circumstances will workers operate an ATV on behalf of the GDTA while under the influence of drugs or alcohol
- The GDTA utility trailer must only be used to transport materials and gear that do not exceed weight restrictions. Under no circumstances except life or limb-threatening medical emergencies should the trailer be used to transport people
- No "doubling up" – passengers are not allowed on a GDTA ATV, unless it is specifically designed as a two person ATV

Failure to comply with this GDTA SWP will trigger the GDTA Rules Enforcement Policy.

Resources, References, Definitions

Revision History

Revision	Date	Description of Change	Personnel Involved
REV 0	Feb 2020	New SWP	D Yanchula
Rev 1	Feb 2023	Changes in BOLD – training required	D Yanchula

SAFE WORK PRACTICE 21 – SAFE TRAILER TOWING

SWP Purpose

This Safe Work Practice (SWP) will provide GDTA volunteers with a set of guidelines or "Do's and Don'ts" that have been developed to mitigate hazards associated with this work task. Volunteers performing this work task are required to be trained, knowledgeable and competent.

Towing is very different from everyday driving – it requires additional driving skills and safety precautions. As a driver, you have a responsibility to other road users when towing a trailer or other vehicle.

Scope

All GDTA workers will comply with the guidelines in this SWP.

Responsibilities

Responsibilities apply to the Trip Manager/Volunteer Lead, all workers, and the Health and Safety Committee.

It is the responsibility of the Trip Manager/Volunteer Lead to

- Comply with this SWP and ensure that workers are trained and knowledgeable in towing
- Be sure that all workers who are towing trailers have been instructed in their proper use and any hazard they pose.
- Reinforce to workers that any recommended controls must be applied consistently
- Require that this SWP be implemented

It is the responsibility of the Workers to

- Comply with this SWP
- Follow recommended controls consistently
- Ensure recommended controls are implemented and used appropriately.
- Immediately report any concerns regarding trailer load limits or damage to the trailer or vehicle hitch to the Crew Lead

It is the responsibility of the Safety Committee to

- Maintain this Safe Work Practice
- Perform periodic audits to assess that these requirements/SWP are being acted upon.
- Reinforce that recommended controls are to be implemented and used appropriately.

Background

Trailer towing involves three primary elements: the vehicle used to tow; the trailer and payload being towed; and towing system components (e.g., hitch system and safety chains). Each has limiting factors that directly affect maximum towing capability.

Truck manufacturers publish maximum trailer tow rating and gross combined weight rating (GCWR) in the trailer towing guide or as part of the vehicle specification guide. Additionally, the trailer towing guide may include maximum trailer tow ratings based on conventional towing (which uses a coupling device attached to the rear of the towing vehicle) or fifth wheel towing (which utilizes a coupling device attached to the top of the chassis near the rear axle and is sometimes referred to as a gooseneck). Alternatively, medium- and heavy-duty truck dealers provide information based on the OEM order guide or through application engineering departments. The chassis manufacturer determines GCWR using a variety of factors, including specific drivetrain components of the engine, transmission, number of drive axles, axle ratios and braking capability. Each OEM tests chassis towing and stopping capability before determining vehicle GCWR.

Chassis manufacturers also provide maximum trailer weights for conventional and fifth wheel/gooseneck towing. Normally, these maximum trailer weights are for complete vehicles such as pickups and vans, and do not include work trucks built from incomplete chassis. Truck GCWR helps determine maximum trailer towing capacity. Both the weight of the towing vehicle and the trailer (towed vehicle) are included in the GCWR total. Essentially, vehicle trailer towing capacity is determined by remaining GCWR after taking into consideration chassis, truck body, equipment, passenger, fuel and payload weight. The amount of payload carried on the work truck can raise or lower maximum trailer towing capacity. For example, if your work truck has a 26,000-pound GCWR and 19,000-pound gross vehicle weight rating (GVWR) and is completely loaded to the GVWR, maximum trailer weight would be 7,000 pounds — even if the truck manufacturer stated the maximum trailer weight was 11,000 pounds.

The second element of trailer towing is trailer GVWR — the maximum allowed weight of the trailer and its payload, which can be found on the required trailer certification label. Typically, the certification label for a trailer is a metal plate welded or riveted to the forward half of the left front. Trailer GVWR will be based on the limiting factors of the axle(s), tires, frame, coupler and safety chains. The trailer manufacturer is required to take all components into consideration when determining final GVWR.

The third factor in trailer towing is the trailer coupling system, which contains the components necessary to connect the towing vehicle and trailer. Conventional trailer, fifth wheel and gooseneck towing systems are rated by SAE International Standards.

Controls

Do:

Provincial Inspection records for the trailer should be available upon request by the trailer driver.

Trailer inspections requirements are covered under Alberta's Vehicle Inspection Program. Trailers towing>=11794 kilograms are required to have an annual inspection by a qualified mechanic. See link below for more information:

https://www.alberta.ca/vehicle-inspection-program-overview.aspx

a) Perform a trailer safety check prior to use.

- Ensure the tires are properly inflated and free of damage.
- Inspect all light, safety chain and break connections for compatibility between trailer and vehicle.
- Perform a function check of all lights and brakes if equipped.
- Check that all connections are secure between the vehicle and trailer and lock pins in place.
- Ensure that ball hitch is the exact size to match the trailer hitch.

b) Make sure the trailer load is balanced side to side and front to back.

c) Ensure that loads are secured to the trailer so that they do not move independently of the trailer, when rocked back and forth by hand

d) Use three points of contact when climbing on and off trailers.

e) Properly attach safety chains in a crisscross or basket configuration prior to departure

f) Pause after 10-20 km of towing to check all hitch connections, load tie downs and adjustments, and again each 100-200 km.

g) Reduce speeds while towing.

h) Allow additional distance for following and stopping to account for additional load on vehicle's controls.

i) Make use of tow/haul function on vehicle and or use lower gears when descending a grade.

j) Perform a walk around of the trailer prior to backing up a trailer.

k) If possible, have a spotter positioned to the rear of the vehicle and trailer to assist in backing up.

l) Make use of turnouts, when required, to let other traffic pass safely.

DO NOT:

a) Do not become complacent about towing on the highway.

b) Do not exceed weight limit of the trailer or tow vehicle (GVWR).

c) Do not decide to tow without necessary safety gear, even for short distances.

d) Do not let safety devices drag on the ground while underway.

e) Do not become distracted while securing or unhooking trailer from tow vehicle.

f) Do not climb on unsecured cargo while tying them down.

g) Do not tow trailers that are damaged.

Training

Experience with towing and familiarity with the existing vehicle and trailer is required. Review controls verify the hook-up and test out towing in a safe environment prior to highway use.

Resources, References, Definitions

Revision History

Revision	Date	Description of Change	Personnel Involved
REV 0	Feb 2020	New SWP	D Yanchula
Rev 1	Feb 2023	Reviewed – No changes	D Yanchula

SAFE WORK PRACTICE 22 – STARS PROTOCOL

SWP Purpose

This Safe Work Practice (SWP) outlines the protocols for working with the Shock Trauma Air Rescue Society, STARS for emergency incidents on GDTA Trail Trips. The STARS Emergency Link Centre (ELC) is a multi-function communications center that is available 24hours a day, seven days per week for emergency response. In the event of an emergency, one call to ELC will provide the GDTA Trip Manager and crew with direct access to the public safety system, local emergency services, emergency physicians and all other transportation providers into one conversation.

Scope

All GDTA workers will comply with the guidelines in this SWP.

Responsibilities

Responsibilities apply to the Trip Manager/Volunteer Lead, all workers, and the Health and Safety Committee.

It is the responsibility of the Trip Manager/Volunteer Lead to

- Comply with this SWP
- Be aware of the protocols for contacting STARS and ensure the satellite phone is in working order to be used in case of emergency to contact STARS – use local number provided
- Require that this SWP be implemented
- **Provide site GPS coordinates and description of access by road to the Safety Committee so that they can obtain the Site Registration and site number and to complete the Trip Emergency Response Plan**
- **Identify a potential helicopter landing site following STARS criteria**

It is the responsibility of the Workers to

- Comply with this SWP and support Trip Manager and Safety Officer in an emergency event.
- Provide any relevant information to the single point contact to support communications with STARS in an efficient manner

It is the responsibility of the Safety Committee to

- Maintain this Safe Work Practice
- Maintain a copy of the STARs contact information and the information required to be provided in an emergency in the first aid kits carried by the Safety Officer on the work site.
- Ensure Trip Manager/Volunteer Leads are aware of the STARS protocols, know how to access STARS and have watched the Landing Zone Preparation and helicopter Safety video prepared by STARS

- **Register the site with STARS, obtain a site number and complete the Emergency Response Plan**

Background

In the event of an emergency it is critical to obtain emergency support as quickly and efficiently as possible to improve potential for recovery. STARS service and having information readily available is the means to achieve this.

Controls

Controls for this SWP may include planning and preparation. Identifying a potential helicopter site for landing near the work area, assessing potential road access and having a detailed description of how to access the site by road, flagging the route where forks in the road may make the route less definite.

Confirmation that the SAT phone is working for the given site location is also essential in order to prepare alternate plans with InReach and trip coordinator if required.

Training

Review of STARS Remote Site Emergency Landing Card and helicopter requirements prior to the trip.

Resources, References, Definitions

- See STARs Site Registration Information Package Below
- Industry@stars.ca Stars website to set up OutReach sessions to train Trip Leaders

Revision History

Revision	Date	Description of Change	Personnel Involved
REV 0	May 2020	New SWP	D Yanchula
Rev 1	Feb 2023	Changes in BOLD	D Yanchula

SITE REGISTRATION INFORMATION PACKAGE

STARS EMERGENCY LINK CENTRE®

The STARS Emergency Link Centre® (ELC) was established in 1996 to meet the needs of Industry working in remote locations. The resulting site registration service provided by the ELC facilitates rapid emergency medical response and transport coordination in the event of an emergency.

STARS bases are located in Calgary, Edmonton, Grande Prairie, Regina, Saskatoon and Winnipeg.

Today, the site registration program is utilized by the oil and gas industry, power/electrical, forestry, mining, recreation, and movie production.

The ELC is 24 hour multi-function communications centre, and we work closely with our partners in the public safety system, also known as the Chain of Survival, to ensure effective and efficient patient care and transport. Our partners include:

- First Responders
- 911 Dispatch Centres
- EMS (Emergency Medical Services)
- Fire Departments, including Dive Teams
- Law Enforcement, Park Rangers and Military Personnel
- Search and Rescue Organizations
- Hospitals, Doctors, Nurses, Paramedics, Emergency Medical Responders
- Registered STARS sites in a given area (referred to as “Neighbour Helping Neighbour”)

In the event of an emergency at your site, one call to the ELC will provide you with direct access to the public safety system, linking local emergency services, emergency physicians, and all other transportation providers into one conversation.

This single-number system saves time, as all parties are communicating directly together from the initial call.

STARS INDUSTRY SERVICES WEBSITE

All site registration information is located on the STARS website at http://www.stars.ca/what-we-do/stars-emergency-link-centre/industry-services/remote-site-registration.

Along the left side of the web page, are a series of documents and links, including:

- Information Brochure — this document - pdf
- Site Registration Form — Excel spreadsheet to register new site(s) and change or close existing sites
- Site Registration Questions — one pager - pdf
- Landing Zone Video — link
- Landing Zone Card - Industry — pdf

CONTACTING THE STARS ELC

Toll-free: 1 (888) 888-4567 or Direct: (403) 299-0932

If you have a satellite phone at your site, you may need to contact the ELC by calling the direct line, as not all satellite phones subscribe to 1-800 service.

Note: There are currently STARS stickers that have #4567 number listed (to access the STARS ELC with your cell phone). ***If you are located in Alberta***, you may still use this number to contact the ELC (always test to ensure this works on your cell phone) but for those outside Alberta, the #4567 number does not work. Therefore, going forward, STARS stickers will list the toll free and direct numbers only.

THREE WAYS TO REGISTER A 'NEW' SITE

1. Call the STARS Emergency Link Centre (toll free or direct) 24 hours per day, 7 days per week – select 'option 2'.
2. Complete the Site Registration Form (Excel Spreadsheet) and email to industry@stars.ca **one business day prior to when you need the site registered.** Once STARS has registered your location, the spreadsheet will be emailed back to you, complete with your new site number in column 'A'.

   Note: This option works during business hours only (0830 – 1600) Monday through Friday, excluding statutory holidays.
3. For large pipeline or electrical projects, please send an email to industry@stars.ca with your contact details, and a general description of your project, including start date. A STARS Industry Specialist will contact you to work out the details.

TO UPDATE AN EXISTING SITE (change location, expiry date or other information)

You may update an existing site using the Site Registration form. Ensure you answer all questions so the changes can be made.

Alternately, you may call the STARS ELC at 1-888-888-4567 and select 'option 2'. You are required to verify two of the following four pieces of information before changes will be made:

1. STARS site number
2. Current leaseholder
3. Location
4. Contact Name

SITE EXPIRY AND CLOSURE

To close your site, call the STARS ELC at 1-888-888-4567 or 403-299-0932 prior to the finish (expiry) date, to either close your site, or update the site to change location, expiry date or other information.

- You may choose 'option 2' to speak with an Industry Call Taker to close/update your site
- You may choose 'option 3' to leave a message to close your site. Please include the site number, the location, and your name/phone number in the message.

Automatic Email - STARS will now email you a notification with a message stating your site is due to close that day (emails are automatically sent at 7 a.m.). To receive email notification, you need to set yourself up as the contact responsible to 'close the site' and provide your email address at that time. If you have not provided an email address, the ELC will call the person designated to 'close the site'.

- If the Call Taker is unable to personally speak with the 'close site' contact, a voice message will be left (whenever possible) stating the site will be closed (inactivated), quoting site number and location.

The leaseholder is billed ONLY for the time the site was operational (active).

No site details are changed and/or lost when the site is inactive for less than one year. After one year has transpired with no activity associated with the site number, the number will be returned to the pool to be reissued.

Please note that when you register your site with STARS:

- There is no guarantee that STARS will fly to your location. This is a physician-led decision based on the severity of injuries/illness, weather, and aircraft availability.
- This is not a replacement for 911 or on-site medical services.
- Certain provincial Occupational Health and Safety requirements may be satisfied. For instance, in Alberta, the interpretations section of the new guidelines states the following:
    - *Occupational Health and Safety legislation requires that an employer ensure that arrangements are in place for the transportation of injured or ill workers from the work site. Registering your site with STARS is a step toward meeting this requirement. Once registered, there is no need to call local emergency services to obtain or confirm their contact numbers.*

For more workplace health and safety information:

- Alberta: http://employment.alberta.ca/SFW/53.html
- British Columbia: http://www.worksafebc.com/default.asp
- Saskatchewan: http://www.lrws.gov.sk.ca/ohs
- Manitoba: http://www.gov.mb.ca/labour/safety

CONTACT INFORMATION

The following contact information is requested for each new site registered, and updated for existing sites whenever applicable:

- **Caller** name and number
- **Primary contact** on site, contact number, company
- **Emergency contact** on site (with level of medical training), contact number, company
- Person responsible to **close the site** when work is complete, contact number, company and email
- Person authorized to **make location changes** to this site, contact number, company
    - If the registering company would like to designate someone in this capacity, it is important to note that ONLY this person will be allowed to update/change location information.
- Leaseholder / Primary Contractor / Billing Company (company invoiced for site registration activity)
    - AFE (Authorization for Expenditure) or Project / Cost Code number - all billing companies request this information be provided at time of registration whenever possible.

TYPES OF SITES

1. **TEMPORARY SITES - $6 per day**

   The ELC registers the site as temporary ***if the work/activity is temporary in nature and is not, or will not eventually become a permanent facility***.

   Although sites are registered by service companies, safety companies, contractors, etc. **only the Leaseholder or Primary Contractor is billed, unless otherwise requested.**

   Examples of temporary sites include:

   - Seismic, construction, drilling, completions, fracs, etc.
   - All small pipeline projects, i.e. tie-ins

   Once work is completed, the site number may be moved to the next location of operations by calling the ELC and providing all details relating to the new location. Please note: when changing locations it is the protocol of the ELC to ask ALL questions related to a change of location.

2. **PERMANENT SITES - $150 per year**

   The ELC registers the site as permanent ***if the location is fixed and/or will eventually be fixed, and will never change.***

   Examples of permanent sites include:

   - Mining operations, facilities including compressor stations, batteries, and gas plants, etc.

   Some companies opt to place permanent signage at their sites. To request samples of permanent signage, email industry@stars.ca.

3. **LARGE PIPELINE and ELECTRICAL PROJECTS (quoted on a project by project basis)**

   These projects will be registered under one site number, identifying many patient evacuation points (landing zones) along the right-of-way.

   To get started registering this type of site, please email industry@stars.ca with your contact details, name of project, and the anticipated start date, and an Industry Services Specialist will call you to work out the details.

LOCATION

Providing a correct surface location is critical to the site registration process, and to any potential emergency response. This is particularly for the well locations in the Oil & Gas industry, as the location provided is sometimes read directly from the regulatory license, which is required to show the bottom hole location in the well name – not the surface location.

Location coordinates come in the following formats (STARS preferred are in red):

1. Latitude and Longitude (GPS)
    a. in Decimal Degrees (dd.dddddd –ddd.dddddddd)
    b. in Degrees Decimal Minutes (Ndd dd.ddd Wddd dd.ddd)
    c. in Degrees Minutes Seconds (Ndd mm ss Wddd mm ss) **preferred**
2. Legal Subdivision (LSD) in NAD83 format (01-01-001-01 W1M)
3. Petroleum and Natural Gas (PNG) grid number (A-01-A/94-A-2)
4. UTM (Universal Transverse Mercator) includes zone / easting / northing coordinates
5. 10TM (Alberta specific UTM coordinates)

STARS Call Takers can convert all above coordinates to meet the location format required to register your site, as follows:

- Alberta, Saskatchewan, and Manitoba: **Requires LSD** (can convert to LSD from GPS)
- British Columbia: **Requires PNG and/or GPS coordinates**
- NWT/Other: **Requires GPS coordinates**

GEOGRAPHICAL REFERENCES

What is the nearest town to your location? This is used to triangulate your coordinates with the town to validate the location provided.

SITE ACCESSIBILITY

Is the site accessible by ground ambulance? If not, provide details.

LANDING ZONE

Is there a landing zone on site? (36 x 36 metres – see landing zone information card at the end of this document)

- If 'no':
  - Identify the nearest place to land a helicopter.

DANGERS TO CREW

Identifying dangers to crews working on registered sites allows the ELC to make emergency responders aware of any potential hazards, such as:

- Is there H2S (hydrogen sulfide) on site
  - Are there any H2S monitors on site
- Other hazards (i.e. dynamite, electrical shock, heavy equipment, etc.)

SAFETY DETAILS

Please provide the following safety resource information:

- Available emergency response resources:
  - Automatic External Defibrillator (AED)
  - Ambulance, MTC, or other vehicle capable of transporting a patient.

STARS OUTREACH

The Outreach Program facilitates the exchange of information between STARS and the organizations we serve, ensuring the most effective patient care and transport possible.

Topics covered during an Operational Outreach session include:

- How to access STARS
- Landing zone preparation and helicopter safety
- Preparing a patient for air medical transport

For more information contact industry@stars.ca

WHEN YOU HAVE AN EMERGENCY ON SITE

Have the following information available:

- Site number
- Contact name and phone number
- Location

A Communication Specialist will verify this information and will immediately connect all other partners in the public safety system into the same conversation.

The Communication Specialist will also ask a series of questions about the patient's condition, and may conference in an emergency Transport Physician to make patient transport decisions.

Modes of transport may include:

- Ground ambulance
- STARS helicopter with medical crew
- Fixed wing air ambulance with medical crew
- Private helicopter

STARS® Site Number _____
Location _____

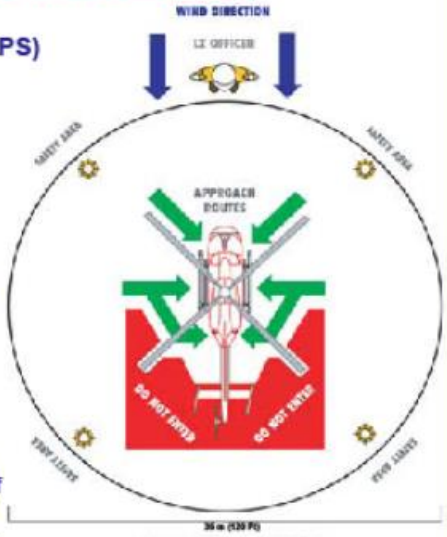
Remote Site Landing Zone Reference Card

In the event of a SITE EMERGENCY
PHONE the STARS Emergency Link Centre®

TOLL FREE	OR	DIRECT
1-888-888-4567		403-299-0932

BE PREPARED WITH THE FOLLOWING INFORMATION

1. STARS Site Number
2. Location of site (Legal Land Description or GPS)
3. Contact phone number at the site
4. Known hazards on-site
5. If applicable, is there a monitor on-site confirming the presence of H_2S



STARS LANDING ZONE

SAFETY GUIDELINES

- the landing zone should be on level ground, (less than 5% slope) at least 36 x 36 metres (120 x 120 ft) and more, if possible, to include a safety zone
- check for loose debris in landing zone THIS IS OF VITAL IMPORTANCE
- ensure no one approaches the helicopter STARS crew will approach you when safe to do so
- everyone should be at least 30 metres from landing zone during landing and takeoff, due to possibility of injury from loose debris caused by rotor downwash
- movement around aircraft is to be in safe areas only
- if necessary, provide road blocks approximately 500 metres on either side of the landing zone

PRE-LANDING CHECKLIST

The STARS Emergency Link Centre will require the following information from the site:

TERRAIN	LANDING ZONE MARKINGS	HAZARDS
level or sloping	4 turbo flares	signs
type of surface	4 road flares / strobes	vehicles
dust, loose snow,	4 reflective flares	trees
rocks, bushes,	4 highway cones (days only)	equipment
stumps, etc.	extra strobes/flares/cones on upwind side	wires

Calgary • Edmonton • Grande Prairie • Winnipeg • Regina • Saskatoon STARS.CA

SAFE WORK PRACTICE 23 – WORKING NEAR OR FORDING SWIFT WATER

SWP Purpose

Working near swift moving water or fording swift water is part of trail crew duties during bridge building. Fording swift moving streams is a common activity for hikers or trail volunteers on the Great Divide Trail especially during spring runoff. This safe work practice (SWP) is intended to help workers in assessing the hazards of swift water – including lack of visible stream bottom creating poor footing, cold water, boulders, strainers, undercut banks, steep slippery banks, bends, ice or snow cover. Proper assessment, planning, picking a location and time for crossing and checking details will help to minimize the risk of swift water incidents.

Scope

This SWP applies to any worker who conducts the following:

- Working within 3 m of swift water (on shore or in swift water during bridge construction)
- Fording of swift water for trail building and maintenance activities

Responsibilities

Responsibilities apply to the Trip Manager/Volunteer Lead, all workers, and the Health and Safety Committee.

It is the responsibility of the **Trip Manager**/Volunteer Lead to

- Be familiar with the hazards of swift water
- Communicate to workers the risks of swift water within the work area or water crossings
- Plan a swift water activity to minimize or potentially eliminate the swift water hazard
- Reinforce to workers that any recommended controls must be applied consistently
- Awareness of workers knowledge in swift water hazards
- Require that this SWP be implemented for all applicable job tasks
- Train workers in a throw rope rescue, planning location of spotters for emergency rescue

It is the responsibility of the Workers to

- Be aware of potential hazards that may be encountered while working near swift water or fording swift water
- Be aware of their personal capabilities and comfort level working around swift water and to refuse work based on personal limitations
- Be aware of and comply with requirements communicated in this SWP
- Assess the swift water location and be familiar with physical hazards
- Ensure recommended controls are implemented and used appropriately.
- Immediately report any refusal or discomfort associated with working around swift water to the Crew Lead.

It is the responsibility of the Health Safety Committee to

- Maintain this Safe Work Practice
- Perform periodic audits to assess that these requirements/SWP are being acted upon.
- Reinforce that recommended controls are to be implemented and used appropriately.
- Proper throw rope techniques during Crew Leader Training

Hazards

Hazards relative to working around swift water or fording swift water could include:

- Strainers -logs, brush or obstructions in water that could allow water to pass through but pin or impale a person to the object due to force of water
- Boulders – large rocks below water surface causing standing waves and strong currents, foot entrapment
- Steep and slippery river banks and river bottom
- Undercut banks that could force a person under water due to strong currents
- Waterfalls – severe drop offs
- Cold water – water temperature could lead to shock or eventual hypothermia
- Force of water exerted on person
- Increased weight of wet gear

Controls

Controls may include elimination of work near swift water, selecting time of day or year for minimum water flow or location of crossing to reduce risk, assessing risks and preplanning to minimize risk impact, administrative, and/or PPE.

PPE - Crews working on bridge building near on swift flowing rivers shall wear a CSA approved Kayak whitewater helmet and fall arrest gear to minimize the risks of falling into fast flowing water.

HAZARD Assessment – If site conditions change significantly the team shall regroup to discuss the hazard changes and potential mitigations required.

Working Near Swift Water – this is defined as within swift water or 3 m of it

PLAN > ASSESS > CHECK *see Reference 2 below

PLAN

- Prepare a detailed plan of bridge building tasks
- Consider alternate methods to eliminate tasks requiring swift water entry
- Select time of year for work execution – after July 15 spring runoff water rates reduce significantly

- Select time of day to execute task – early morning potentially lowest flow rate (observe water for a day to confirm min flow times)
- Provide PPE to complete planned task – (hip waders with warm insulation, sturdy closed toe shoes with grip, helmet (Approved paddling helmet), PFD (task dependent)
- Prepare a rescue plan for a scenario where a worker is swept away – include spotter downstream with throw bag
- Plan a method to tie off tools and equipment to prevent loss in swift water
- Plan access to water if entry is required
- Swift water tasks should be planned and adapted to be within the worker's capacity.

ASSESS

- Observe water flow rates during day to select time to complete swift water tasks during minimum water flow rate
- Depth of water in planned work area - **swift water work should be aborted if water higher than knee height**
- Footing – slippery, varying depths, sharp rocks, entrapment
- Water access entry points – slippery or steep – modify for safe entry if required (tied off rope, ladder)
- Upstream and downstream for any debris that could become a strainer, dislodge from upstream to impact downstream work
- Downstream river bottom obstructions: boulders, fences, ice bridges
- Probable path of worker if they are swept away (observe current by throwing in stick)
- Assumptions in pre-plan to confirm that they are consistent with actual swift water conditions or site layout – rework plan to satisfy actual site assessment
- PPE (adequate for planned task -When working in cold temperatures, wear good, insulated clothing – assess it does not increase hazard in swift water work)
- Ensure PPE is in good repair (no leaks in hip waders, no damage if helmet used)
- Clear obstacles/downstream strainers where possible
- Emergency plan, locations for spotters and any unknowns previously not identified that could impact a rescue

CHECK

- Swift water hazards have not changed from assessment – if changed – back-out and re-assess plan
- Worker executing swift water task is competent and capable of completing task and aware of what to do if swept away
- Emergency plan in place prior to start of work (spotters knowledgeable with throw bag rescue in place, entry access available (if required), PPE in use)
- Task is manageable duration to prevent fatigue, loss of dexterity

- Communicate with worker to ensure they are comfortable, no new unforeseen risks – **STOP – back-out and re-assess or get help if required**
- Do not rush or cut corners.
- Designate a worker to be safety coordinator to clearly communicate to prevent swift water worker from losing stability in current or feeling effects of hypothermia.

FORDING SWIFT WATER

Fording swift water is one of the most risky and variable tasks of hiking. It is critical to minimize or eliminate any unnecessary risk. There are many good references of safe practices for swift water fording that are included as a reference in this document. Controls that eliminate risk can be broken down in an easy to recall saying:

PLAN > PICK > ASSESS > CHECK

PLAN

- Pack essential items (sleeping bag, warm set of clothes, fire starter, electronics) in dry bag
- Pack hiking poles or locate a hiking stick for 3 points of contact river crossings
- Pack closed toed sturdy shoes for river crossings (or use hiking boots)
- Check trail reports and maps to be aware of swift water fords on your route and potential alternate routes
- Plan time of year for hike based on difficulty of river fords and runoff conditions
- Prepare for potential of hypothermia – know the signs and how to treat for it
- Discuss methods of safely fording swift water with hiking group
- Be aware of rescue techniques, emergency plan and discuss with group in advance

PICK

- Minimum water flow rate time of day to ford – usually early morning to cross swift water
- Scout upstream and downstream to select easy access point where water is shallower and slower
- A crossing point that is suitable for the entire hiking group
- A crossing method best for location of crossing (single 3 point, group linked up)
- A back-out plan (wait it out, alternate crossing point, alternate route) if hazard too great for group comfort level

ASSESS

- Water properties – standing waves, uneven bottom, clarity of water, any strainers downstream of crossing point
- Water current – toss a stick in upstream and observe water speed and currents

- Water Depth – avoid cross swift moving water deeper than knees if possible (be ready to back out based on force of water and comfort level)

CHECK

- Personal items are secured safely so that will not cause drag or become snagged if swept away, hands are free, any belts are released, straps loosened for quick exit from pack if required
- Swift water hazards have **NOT** changed from plan or earlier assessment – **re-assess if hazards have changed**
- Face upstream, lean into current, take small slow side steps across ford maintaining two points of contact (one foot, one pole, both feet)
- Keep eyes on far shore – swift water may cause dizziness
- Comfort level – **back-out and re-assess alternate plan if outside personal limits**

See reference attached for safe crossing techniques (single and group crossing), how to assess swift water, optimum crossing points and rescue techniques

Training

Workers who are involved in bridge building tasks near swift water should be made aware of hazards and signs of swift water hazards, be aware of the detailed plan for bridge building and the emergency rescue plan in case of an incident. All workers need to be aware of **back out limits** where work is stopped and re-evaluated due to changes in swift water conditions.

Resources, References, Definitions

1. U.S. National Park Service, Safe River Crossings: https://www.nps.gov/articles/safe-river-crossings.htm - see included below.

2. U.S. National Park Service Swiftwater Rescue Manual. Throw bag use – pages 54 – 58, wading rescues, pages 59 and 60 - http://mra.org/wp-content/uploads/2016/07/nps-swiftwater-rescue-manual-rev09-23-2012-SMALL.pdf - see pages 54 to 58 included below

3. Pacific Crest Trail Association, lots of text, some worthwhile photos. Suggestion of stationing a bystander ready with a throw rope downstream with knowledge of its use – very wise: https://www.pcta.org/discover-the-trail/backcountry-basics/water/stream-crossing-safety/

4. New Zealand Mtn. Safety Council, good diagrams and point format: https://www.bushwalkingleadership.org.au/resource/river-crossings-techniques/ - see included below.

5. Trail Hiking Australia, worthwhile details on using a pole for crossing: https://www.trailhiking.com.au/river-crossing-techniques/

Revision History

Revision	Date	Description of Change	Personnel Involved
REV 0	Mar 2021	New SWP	D Yanchula
Rev 1	Feb 2023	See changes in bold	D Yanchula

Appendix 2 GDTA Volunteer Warning

GDTA Discipline Summary Report

Entry #	Worker First Name	Worker Last Name	Project	Investigated by	Warning given by	Warning Issued (details)	Offence #

Volunteer Warning

Date:

Attention:

Re.

This letter is to serve as a formal warning that is has been brought to the attention of the GDTA that a violation of our safety policies had occurred during work which was carried out by yourself on behalf of the GDTA which is in violation of Alberta OH&S legislation. Violations of this nature can create a danger both to the individual involved and potentially other workers. The GDTA takes these violations very seriously. Further incidents of this nature will result in further disciplinary actions up to and including removal from service for the GDTA.

Name: _____ Signed _____ Trip Manager

Name: _____ Signed _____GDTA President

Appendix 3 Hazard Assessment and Control Report

Below is the Scoring Guide used by the Alberta Government associated with Hazard Assessment and Control Reports, See https://open.alberta.ca/dataset/d15fd819-4bce-413e-9333-709928546337/resource/53f61081-0e58-4b3f-82e5-5f368d327b9a/download/2015-03-ohs-best-practices-bp018.pdf.

Rank the hazards according to risk.

There are various ways to rank hazards and prioritize their controls. It doesn't have to be complicated. The important thing is to be consistent. Be sure to use the same ranking system throughout your organization.

This is a basic approach. Start by asking these three questions:

What could go wrong? **(Hazard)**

How serious could the consequences be? **(Severity)**

How likely is it to happen? **(Likelihood)**

Assign each hazard a number from 1 to 3 to describe **severity**, where:

3. It could kill you or cause a permanent disability, today or over time.
2. It could send you to the hospital.
1. It could make you uncomfortable.

Then…

Assign each hazard a number from 1 to 3 to describe **likelihood**, where:

3. It is highly likely.
2. It might happen.
1. It is unlikely.

Multiply the score of severity and likelihood for each hazard. The hazards with the highest scores pose the greatest risk to workplace health and safety.

Risk matrix

		Severity		
		Make you uncomfortable 1	Send you to the hospital 2	Kill you/cause a permanent disability 3
Likelihood	Unlikely 1	1	2	3
	Might happen 2	2	4	6
	Highly likely 3	3	6	9

Using the above risk matrix, a hazard that ranks a 3 for severity and a 3 for likelihood would score a 9 (3 x 3 = 9). A hazard with a 1 severity and a 3 likelihood would score a 3 (1 x 3 = 3). The hazard that scored 9 in the matrix should be addressed first.

Engineering Control		
	Engineering controls are considered first because they are the only control method which can eliminate the hazard. The goal is to design work environments, work processes and equipment that eliminate the hazards. Whenever possible, hazards should be eliminated or controlled at their source—as close as possible to where the problem is created. When eliminating hazards or identifying and developing controls, involve the employees who are knowledgeable about the work through: • participation in the development of a hazard assessment • review and feedback on an already prepared hazard assessment	
	Example	**Description**
	Elimination	Remove and prohibit the use of bleach for cleaning
	Substitution	Use ultra violet light instead of chlorine for disinfecting water
	Isolation	Enclose a noisy power generator to protect employees from noise exposure
	Ventilation	Install a local exhaust ventilation system in a welding operation to eliminate welding fumes
	Shields	Put a guard on a piece of machinery to prevent contact by employees
Administrative Controls		
	Administrative controls focus on process, procedure and best practices and are generally not as effective as engineered / design controls.	
	Example	**Description**
	Safe Work Procedures	Procedure for Working Alone
	Safe Operating Procedures	Chainsaw Safe Operating Procedure
	Staff Rotation	Vary tasks in a shift to allow employees to use different muscle groups or to lessen exposure to the hazard
	Hazard Warning Signs	Post hearing protection signs in locations with excessive noise
	Training	Occupational Health and Safety Leadership, Hazard Assessment, Fall Protection, Confined Space Entry
	Codes of Practice	Confined Space Entry, Respiratory Protective Equipment
	Maintenance Programs	Follow vehicle, forklift, or pallet jack maintenance programs
Personal Protective Equipment Control		
	The third hazard control considered is the provision of proper personal protective equipment (PPE) for employees. PPE is frequently used in combination with engineering and/or administrative controls. The PPE must meet accepted standards in the Occupational Health and Safety Code (CSA, NIOSH, etc.), the Government of Alberta	

	Occupational Health and Safety Program.	
	Example	
	Chemical resistant, puncture resistant gloves	
	Respirators that meet NIOSH standard	
	Hardhats that meet CSA standard	
	Hearing protection that meet CSA standard	
	Foot protection that meet CSA standard	
	Clothing appropriate to the identified hazard	
	Eye protection that meet CSA standard	

For GDTA HACR – SEE GDTA – HACR EXCEL FILE. It is included in the Hard copy binder of the Safety Manual or in Dropbox.

Appendix 4 Orientation Signoff Form

ORIENTATION FOR VOLUNTEERS

Instruction to Safety Coordinator:

- Use this checklist to orient core volunteers prior to their first day of work.
- Only check off each subject when you are sure that the volunteer fully understands it.
- This orientation should take approximately 2 hours. Once finished, have the volunteer sign the bottom. This is to indicate they have received the orientation.
- The Trip Manager will also sign the bottom to indicate the orientation has been given.

Once the orientation is completed, a copy will go into the Hardcopy of the safety manual for the duration of work and another onto the GDTA Safety Committee Document Folders.

Volunteer Name (print): _____

Supervisor (print): _____

Work Start Date: _____ Orientation Date: _____

Orientation Topics:

- ☐ Health and Safety Policies
- ☐ Hazard Assessments / Work site specific hazards
- ☐ Controls and Safe Work Procedures
- ☐ General Safety Rules
- ☐ Volunteer Responsibilities
- ☐ Employer Responsibilities
- ☐ Personal Protective Equipment
- ☐ Emergency Response Procedures
- ☐ Training Requirements
- ☐ Enforcement Policy
- ☐ Right to Know and Refuse
- ☐ Reporting Obligations for Accidents/Unsafe Acts/ Health Concerns Working Alone

Supervisor (sign): _____ Date: _____

Volunteer (sign): _____ Date: _____

Appendix 5 Safety Training Certification Matrix

See Later update in Hard copy Safety Manual Binder or in Dropbox

Appendix 5 - Safety Training Certification Matrix - Updated Feb 27, 2023:							
Volunteer Name	ATV Use Agreement **(Required yearly)**	Chain Saw Use Agreement **(Required Yearly)**	Standard First Aid / Expiry Date	"Other" First Aid (Specify)	Chain Saw Certification/ Cert Date	ATV/ UTV Safety Training	Other Safety Certificates
Jeremy Bateson			Std First Aid with CPR-C-AED, March 17 2025				
Doug Borthwick			Std First Aid with CPR-C-AED, May 29, 2025		Hard Hat Training Series Chainsaw Safety Training (CAN), May 18, 2020.		
Dan Durstan			WorkSafe BC Level 1 Occupational First Aid, April 9, 2024	Emergency First Aid for Industry (OFA Level 1 Equivalent), Apr 9, 2021			
Jeff Gruttz			Std First Aid with CPR-C-AED, July 17, 2023		Chainsaw Safety and Cutting Techniques, Arboriculture, July 13, 2015		Hazard and Danger Tree Cutting and Falling, Arboriculture, Nov 17, 2017
Kate Hamilton			Advanced Adventure Medic 2024-09-24				
David Higgins			Std First Aid with CPR-C-AED, July, 2023		Chainsaw Safety and Cutting Techniques, Arboriculture, May 16, 2019		
Dave Hockey			Std First Aid with CPR-C-AED, Jun 5, 2021		Chainsaw Safety and Cutting Techniques, Arboriculture, May 11, 2018		Crosscut Sawyer Certification, July 15, 2018
Jack Jaggard					eSafetyFirst Chainsaw Safety Course, June 6, 2021		
Peter LaBastide			Std First Aid with CPR-C-AED, Jun 16, 2023		Chainsaw Safety and Cutting Techniques, Arboriculture, May 11, 2018		
Gord Mathies			Std First Aid with CPR-C-AED, Feb, 2026		Chainsaw Safety and Cutting Techniques, Arboriculture, May 11, 2018		
Stuart Mitchell			Std First Aid with CPR-C-AED, Jun 22, 2025				
Mandi Parkins			Advanced Adventure Medic-Wilderness First Responder. Nov 11, 2023				
Annette Schieck			Std First Aid with CPR-C-AED Recertification, Dec 10, 2022				
Jim Schieck			Std First Aid with CPR-C-AED (Blended), Feb 27, 2024		eSafetyFirst Chainsaw Safety Course, February 23, 2021		
Brad Vaillancourt			Std First Aid with CPR-C-AED, Dec 5, 2022				
Jud Virtue			Std First Aid with CPR-C-AED (Blended), Jun 18, 2023				
John Walsh					Chainsaw Safety and Cutting Techniques, Arboriculture, May 11, 2018		
Dustin Whyte			Std First Aid with CPR-C-AED, May 30, 2022				
Deborah Yanchula			Std First Aid with CPR-C-AED, March 17, 2025				

Appendix 6 GDTA Volunteer Agreement on ATV Use

GDTA Volunteer Agreement on ATV/UTV Use

I _____ agree to the following:

I have completed the UTV/ATV Safety Training Certification to use an ATV/UTV for GDTA work.

I have operations experience safely using the ATV in similar type terrain.

For use of personal ATV for GDTA work: I confirm that my ATV vehicular license and insurance is valid.

I agree to comply with all GDTA rules and regulations for operation of this machine.

I agree to report to the GDTA Trail Crew Leader all damages incurred during my use of this machine.

I agree to report and participate in maintenance related issues identified on this machine, unless it is rented.

Signed: _____ Dated: _____

Appendix 7 GDTA Volunteer Agreement on Chain Sawing

GDTA Volunteer Agreement: Chain Sawing

I _____ agree to the following:

I have completed an accredited GDTA recognized course for operation of a chain saw.

I have reviewed the GDT Safe Work Practice SWP-18, Using a Chainsaw".

I agree to comply with all GDTA rules and regulations for operation of chain saws including use of PPE and adherence to limitations stipulated by my accreditation level.

I agree to report to the GDTA all damages incurred during my use of GDTA chainsaws.

I agree to report and participate in maintenance related issues identified on GDTA chain saws as a condition of my continued permission to operate them.

Signed: _____ Dated: _____

Trip Manager Name:_____ Signature:_____

Appendix 8 GDTA Incident Report Form

See form in GDTA Safety Manual Binder or Dropbox.

Appendix 9 Safety Committee Activity Summary

For the Period Ending: _____

Month/Year

☐ **Monthly** ☐ **Bi-annually** ☐ **Yearly**

Number of trail work days: _____

Number of completed orientations: _____

Number of Safety Tailgate Meetings conducted: _____

Total unsafe acts/conditions identified: _____

Number corrected/ Outstanding: _____

Number of reported incidents: _____

Damage only: _____

Injury only: _____

Injury and damage: _____

Vehicle accident: _____

Number of investigations: _____

Completed / Outstanding: _____

Recommendations: _____

Comments: _____

_____

Safety Chair: _____ **Date:** _____

Appendix 10 ATV/**UTV** Pre-use Inspection

ATV/UTV Inspection

Below is the list of safety checks that **MUST** be carried out prior to ATV use:

1. Daily Risk Hazard Assessment reviewed
2. Check fuel
3. Check oil
4. Check coolant
5. VHF radio, cell phone, Sat phone &/or SPOT device in working order
6. Appropriate apparel for weather, first aid kit
7. Walk around of equipment to check for loose nuts, bolts, proper tire inflation, hitch, trailer connection (if applicable)

Field Level Hazard Assessment (Trail Building and Maintenance)

Instructions: Check off the hazards that apply to this job in the list below. On the reverse side, list and prioritize tasks and hazards, identify and record the risk ranking, and record your plan to eliminate or control each hazard.

Environmental Hazards		Access and Egress Hazards		On Site Safety Checklist	
1. Weather conditions	☐	19. Damaged or hazardous trail condition	☐	29. Additional tailgate meeting needed	☐
2. High fire risk or active fire	☐	20. Prolonged transport time to site	☐	30. Identify site specific hazards	☐
3. Wildlife hazard posted or fresh signs	☐	21. Tools properly secured/stowed/stored	☐	31. Mitigate hazards	☐
4. High water or flooding	☐	22. Uneven ground	☐	32. Identify muster point	☐
5. Extreme temperature(cold/heat)	☐	23. Alternate access/egress route identified	☐	33. Tool cache/storage identified	☐
6. High wind/trees swaying	☐	24. Evacuation (alarms, routes, phone #)	☐	34. Safety equipment/PPE in place	☐
7. Trail users in area	☐			35. Trail construction signage posted	☐
8. Spill potential (gasoline)	☐	**Overhead Hazards**			
9. Hazard trees in work area	☐	25. Falling objects –branches/trees	☐	**Tools**	
10. Fall hazards – cliffs, steep slopes	☐	27. Leaners and Hangers	☐	36. Proper instruction	☐
11. Trip hazards – roots, deadfall, rocks	☐	28. Power lines	☐	37. Proper PPE/Guards	☐
		29. Chainsaw in use? Tree felling	☐	38. Broken and taken out of use	☐
Ergonomic Hazards				39. Improper tool for the job	☐
12. Awkward body position	☐				
13. Over Extension	☐			**Personal Limitations or Hazards**	
14. Prolonged twisting, repetitive, or bending	☐			40. Procedure not available for task	☐
15. Working intight space	☐			41. Confusing instructions	☐
16. Heavy lift or awkward to lift	☐			42. No training for task or tools in use	☐
17. Hands not in line of sight	☐			43. First time performing task	☐
18. Working above head	☐				

Alphanumeric Risk Assessment

SEVERITY	LIKELIHOOD
1. Make you uncomfortable	1. Unlikely
2. Send you to the hospital	2. Might Happen
3. Kill you/Cause permanent disability	3. Highly Unlikely

Severity x Likelihood = ***Risk Ranking*** *(≤2 Low, >2 and ≤6 Medium, >6 High)*

It is important to identify and control all hazards. Confirm that all permits are valid.

Remember: ***Stop & Think***

Generic FLHA Card *Produced by Alberta Construction Safety Association* *www.your* ***acsa****.ca*

Field Level Hazard Assessment	Trip Name, #:		Date:
Work to be done:			
Task location:			Muster Point:
PPE Inspected: ☐Yes	Tools inspected:	Emergency#: **See Emeregency Response Plan**	

Are you feeling good today?

List and prioritize tasks and hazards below. Record the risk ranking and record your plan to eliminate or control each hazard.

Task	Hazards	Risk (L,M,H)	Plan to eliminate/control hazards

Pre-use inspection of tools/equipment: ☐Yes ☐No	Warning ribbon needed: ☐Yes ☐No
Working alone? ☐Yes ☐No	If yes, explain:

Job completion

Area cleaned up at end of job/shift:	Any tools need repair: ☐Yes ☐No Specify:
Hazards remaining: ☐Yes ☐No	If yes, explain:
Incidents/injuries: ☐Yes ☐No	If yes, explain:

All crew members print and sign prior to starting work.

Worker's Name	Signature	Initials	Worker's Name	Signature	Initials

Crew Lead name and signature (after review)		Note: all names must be legible
Safety Officer name and signature (after		

Appendix 12 Emergency Evacuation Plan

The Emergency Evacuation Plan is **attached** to this Safety Manual (see hard copy binder) and located in First Aid Kits and Satellite phone case in field.

Generated each year – site and trip specific

Appendix 13 GDTA Environmental Policy

Policy Number:	POL-00110	Version:	1
Drafted By:	Robert Boyce	Board Approval Date: March 16, 2021	

Introduction

The Great Divide Trail Association (GDTA) is committed to preserving the Great Divide Trail's unique wilderness experience for future generations. The activities of the GDTA work towards the completion, maintenance and long-term protection of the trail and includes cooperation with government managing trail sections beyond the GDTA's authority. The GDTA will develop and follow practical, sustainable environmental practices in its activities. The GDTA also seeks to promote and encourage trail use in a manner consistent with the conservation and preservation of the scenic, wilderness, and heritage value of the Canada's Rocky Mountains.

Purpose

This purpose of this policy is to commit the GDTA's board, staff and all volunteers to uphold environmental ethics as described in the GDTA's 'Environmental Program' while building and maintaining the GDT.

Policy

The GDT is routed through National Parks and a combination of Public Land and Provincial Parks in Alberta and British Columbia. The GDTA will ensure that its policies and practices meet or exceed the applicable federal and provincial environmental legislation for the jurisdictions where the GDT is routed. If federal and provincial legislation applies for specific work the more stringent legislation shall be applied. The GDTA will retain important documents with its Document Management Policy.

This commitment applies equally to trail planning, construction, maintenance, protection and promotional activities. Individuals working on behalf of the GDTA will receive training on the practices and regulatory requirements applicable to their work. The GDTA supports the "Leave No Trace" initiative to promote and inspire responsible trail use through education, research and partnerships. GDTA acknowledges that "Leave No Trace" builds awareness, appreciation and respect for our wildlands.

The GDTA's Environment Program, practices and training materials will be available to the public, members and volunteers of the GDTA.

The GDTA approach to environmental protection includes these principles:

- continually seek improvement in our Environment Program and practices;
- take reasonable and practical steps to protect humans, animals, plant life, air, water and soil;
- minimize the volume of materials used and waste generated;

- recycle waste and use recycled products whenever possible;
- dispose of work by-products in a manner that protects the environment and trail aesthetics;
- utilize environmentally sustainable trail building and maintenance techniques, minimizing the removal of brush and trees during trail building and maintenance when possible;
- minimize or eliminate, where possible, motor vehicle use during trail work;
- train volunteers in a manner that reflects the GDTA's environmental principles;
- minimize the impact on sensitive flora and fauna;
- protect species at risk and critical habitat;
- store fuel, oils and other chemicals appropriately and minimize the volume used;
- develop work plans and practices that minimize environmental hazards and impacts;
- Incorporate 'Leave no Trace" training and practices into GDTA volunteers' orientation and training programs;
- factor environmental stewardship (potential for overuse) into trail development decisions;
- minimize potential risk to aquatic ecosystems and put controls in place to prevent water pollution when working around water;
- collaborate with stakeholders and groups that support environmental stewardship of the GDT.

Responsibilities

Overall accountability for the actions of the GDTA resides with the Board of Directors. The Board approves all official GDTA documents and projects. The Board is accountable and responsible for ensuring that this policy and related program is followed by individuals representing the GDTA and executing work on its behalf.

Under the direction of its Chairperson, the Safety and Environment Committee is accountable to the board for the development of this environmental policy, related program, practices and training of Trip Leaders to oversee the implementation of this program.

The Trip Managers, who directly oversee GDT work, are accountable to the Safety and Environment Committee and its Chairperson for educating volunteers about the Environmental Policy, related program and practices and ensuring that they are implemented.

All individuals acting on behalf of the GDTA are expected to follow this policy, related program and practices applicable to their activities.

Related Documents

The GDTA Environment Program and the Safety and Environment Committee Terms of Reference work in conjunction with this policy.

Authorization

The GDTA Board authorizes and supports the philosophy, implementation and use of this policy.

Appendix 14 Safety Committee Terms of Reference

TOR-0050 Safety and Environment Committee Terms of Reference Rev. 001

Policy Reference(s): POL-0220 Organization and Governance Structure
POL-00110 GDTA Environmental Policy

Type of Committee: Standing **Committee Term:** On-going, subject to an annual review.

Level of Authority: **Organization:** Provides recommendations to the Board for approval and, upon approval, is responsible for their implementation.

Financial: Expenses approved within the Board approved annual budget and as specified in the GDTA's Financial Control and Authority Matrix.

Authorized By: GDTA Board

Reports To: GDTA Board

Ex-Officio Board Representative: President

General Purpose: The Safety and Environment Committee shall assist the Great Divide Association have "zero" safety incidents and environmentally, "leave no trace."

Scope: The Safety and Environment Committee reports to the GDTA Board. The Board is ultimately accountable for the Association's safety and environmental performance, ensuring members and volunteers adhere to the Association's safety and environmental expectations and have the resources necessary to meet these expectations. The Committee's role is to provide safety and environmental expertise and implement a strategy for protecting members, volunteers, and the environment.

Key Responsibilities:

- Create an effective Safety and Environmental Protection Program and implementation plan in keeping with all applicable laws and rules and in keeping with the Association's Values.
- Develop, for the Board's implementation, yearly key safety and environmental performance metrics, a continuously evolving safety and environmental communication strategy and organizational philosophy.
- Develop and implement an incident and near-miss reporting and investigation structure. Provide expertise to determine the root causes of incidents and near-misses and provide recommendations to the Board to prevent their reoccurrence.
- Carry out the administrative activities for measuring and monitoring the safety program. Utilizing trained association members, periodically perform

administrative and physical site audits to determine program effectiveness and participant adherence. Based on observations, program performance solicited and unsolicited input from members and volunteers, provide recommendations to improve safety and environment protection.

- Develop and implement a documentation methodology for safety and environmental reporting, record keeping, tracking of certifications, etc.
- Working with Association committees, develop documented site and task specific safety and environmental protection work and camping practices.
- Working with the committees, develop and implement training sessions to familiarize leaders in the requirements of the Great Divide Trail Association's Safety and Environmental Protection Program and practices.

Composition: Committee will consist of a Chair and at least two additional members. A Board member will be part of the Committee and will act as the Board representative. The Committee will have the ability to draw in other members on an ad hoc basis if required.

Meetings: The Committee will meet informally, in person, by email or other means as needed to achieve its mandate.

Objectives: The Safety and Environmental Protection Committee objectives shall be established yearly and shall align with the GDTA's strategic plan and budget. The objectives shall take into consideration and be measured against the Association's membership, monetary, safety and environmental key performance metrics

Reporting: A written progress report of the Committee's objectives will be provided to the Board before each Board meeting. The report will outline the Committee's plan status and challenges. It will also describe key risks, expenditures versus budget and upcoming interactions between the Safety and Environmental Protection Committee, the Board and other committees.

At the conclusion of each year, a detailed progress report will be provided to the Board for consideration. The report will outline objective results, including a summary of Safety and Environmental Protection Performance. A description of the Committee's performance will also be provided (what went right, what can be improved upon.)

Terms of Reference Review & Evaluation: The Board will review annually.

Written By: Doug Whiteside, Deborah Yanchula

Approval Date: November 18, 2020

Review Date: November 18, 2021

Appendix 15 Site Field Inspection Template

GDTA Field Safety Inspections

Purpose: To assess implementation of Safety protocols, identify gaps for potential Safety Program improvements.

i) Completed once per Trail Building Trip. (Day 3 suggested)

ii) Conducted by a designated trip member, results shared at following day's tailgate meeting.

iii) Signed copy of inspection to be maintained with Tailgate Meeting forms during field work, maintained with Safety Records for 3 years for audit purposes.

Date:		Trip # and Location:	
Trip Manager:	PRINT/SIGN	Safety Officer:	PRINT/SIGN
Safety Inspection conducted by:	PRINT	SIGN	
Safety Inspection witnessed by:	PRINT	SIGN	

		Y/N	Comment
1	Is there a tailgate meeting form signed by all workers or by Safety Officer with workers acceptance (COVID) for the day?		
2	Are volunteers wearing PPE (safety glasses, gloves, covered toes)? chain saw and brushers (hard hat, face shield, hearing protection, gloves)?		
3	Are chain saw and brusher workers wearing PPE (hard hat, face shield, hearing protection, gloves)?		
4	Do chain saw workers have blood stopper kit and sat phone with them?		
5	Is the portable MUSTER SIGN posted and do volunteers know where it is?		
6	Are volunteers carrying tools correctly?		
7	Are volunteers maintaining circle of death spacing while workingand clearly communicating when passing through zone?		
8	Are any workers working alone? If yes, why?		
9	If yes, are they following "Safe Work Practice" recommendations to work alone.		
10	Are volunteers aware of who the safety officer is? Where First Aid kit is available?		
11	Are volunteers aware of hazards in their work?		
12	Are "Good Housekeeping" practices used (unused tools stored off trail, sharp ends down, branches cleared off trail…)?		
13	Are there any unsafe work practices observed? Describe		
	Final comments:		

R0 - First Issue, February 2021

Government of Alberta (GOA), Glossary of Terms & Abbreviations

Occupational Health and Safety Management
Glossary of Terms and Abbreviations

GLOSSARY OF TERMS

Notes

Some terms listed in this glossary have synonyms. A "see" cross-reference redirects the user to the more commonly used synonym, under which you will find the glossary definition.

A "see also" cross-reference lists a related term or terms that may assist in your understanding of the word or phrase.

Accident	See "Incident."
Accidental Release	An unplanned or accidental • discharge, emission, explosion, out gassing or other escape of dangerous goods, or any component or compound evolving from dangerous goods • emission of ionizing radiation that exceeds a level established under the Nuclear Safety and Control Act See also "Imminent Accidental Release," "Dangerous Goods," "Dangerous Goods Accident," "Dangerous Goods Incident," "Incident."
Activity	See "Task."
Activity Inventory	See "Task Inventory."
Administrative Control	A process developed by the Government of Alberta to control hazards not eliminated by engineering controls (i.e., safe work policies, practices and procedures, job scheduling, job rotations, and training).

	See also “Hazard Control.”
Administrative Workplace	A workplace where the employees normally undertake office or administrative tasks that may involve public contact, which is typically limited to information exchange and travel to other locations to perform similar tasks. See also “Workplace.”
Adverse Health Effect	Impairment of or damage to the environment, human health or safety, or property.
Alberta Public Service	APS (abbreviation). See “Government of Alberta.”
Audit	An evaluation of an organization’s health and safety management system against an approved standard. Audit results are used to identify strengths and improvement opportunities at a workplace or in a department, and they help with continuous improvement in the implementation of the Government of Alberta Occupational Health and Safety Program. Partnerships in Injury Reduction includes the following audit types: • Baseline Audit • Certification Audit • Maintenance Audit • Qualification Audit See also “Partnerships in Injury Reduction.”
Auditor	An individual certified by Public Service Commission to conduct health and safety audits within the Government of Alberta.
Baseline Audit	An evaluation using the standard audit instrument and intended as a preliminary review of the implementation of the Government of Alberta Occupational Health and Safety Program. See also “Audit.”

Behavioural Health and Safety Measure	Observable behaviour performed with a health and safety purpose including performing a task in a safe and healthy manner, completing health and safety assignments and training and participating in events to promote or recognize health and safety.
Best Practice	An agreed-upon method for conducting a specified task established and used by industries, trades or groups of peers.
Biological Hazard	An agent (e.g., viruses, bacteria, fungi and molds, and parasites) that acts in or on the body to produce disease or infection. See also “Hazard,” “Routes of Entry.”
Cause	The reason why an incident occurred. Identifying the cause is necessary to determine what corrective actions can prevent similar incidents from occurring in the future. Causes include direct causes and contributing factors. See also “Contributing Factors,” “Direct Cause.”
Certificate of Achievement for Safety Excellence	CASE (abbreviation). A tool to evaluate the implementation of the Government of Alberta Occupational Health and Safety Program. See also “Health and Safety Program.”
Certificate of Recognition	COR (abbreviation). An award presented by Public Service Commission, as the Certifying Partner, to workplaces that successfully pass an audit and maintain their occupational health and safety program to the requirements of the Partnerships in Injury Reduction program. See also “Partnerships in Injury Reduction.”
Certification Audit	A formal health and safety evaluation conducted by a certified auditor external to the workplace or department that seeks a Certificate of Recognition. See also “Audit.”
Certifying Partner	Under the Partnerships in Injury Reduction program, Certifying Partners are responsible for assessing the quality of health and

	safety programs in Alberta. They train and certify auditors and issue Certificates of Recognition to employers. Public Service Commission is the Certifying Partner for the Government of Alberta. See also “Certificate of Recognition,” “Partnerships in Injury Reduction.”
Chemical Hazard	A chemical substance that can have immediate or long-term health effects and can be inhaled, absorbed, ingested or injected. See also “Hazard,” “Routes of Entry.”
Close Call	See “Near Miss.”
Code of Ethics	A statement that defines the ethical behaviors expected from a group or individual.
Code of Practice	Practical guidance on the requirements of the regulations or the adopted code applicable to the workplace, and on safe working procedures in respect of the workplace.
Competent Employee	A person who is adequately qualified, suitably trained and has sufficient experience to safely perform work without supervision or with only a minimal degree of supervision.
Component	A part within an element of the Government of Alberta Occupational Health and Safety Program. For example, the Hazard Management element has three components: Hazard Assessment, Elimination and Control; Ergonomics; and Workplace Violence. See also “Element,” “Occupational Health and Safety Program.”
Concern	A matter of interest. See also “Health and Safety Concern.”

Consensus	General agreement on an issue; the agreement of all or most of the people consulted. Health and Safety Committees in the Government of Alberta operate by consensus. A decision or recommendation may not be an individual's ideal choice, but each individual agrees to support and defend the choice of the group.
Contaminated	Affected by the presence of a harmful substance on employees or at the workplace in a quantity sufficient to pose a risk to health. See also "Harmful Substance."
Continuous Improvement	Always striving to innovate current practices and implement new practices to improve on current conditions.
Contract Manager	An employee who signs a contract or agreement on behalf of the Government of Alberta. When no written contract or agreement exists, the contract manager is the employee who authorizes the arrangement for services to be provided by another employer.
Contracted Employer	An employer hired under agreement to provide services to the Government of Alberta.
Contracted Worker	A contracted employer's employee.
Contractor	A person, partnership or group of persons who, through a contract, agreement or ownership, directs the activities of one or more employers involved in work at a workplace.
Contributing Factors	The underlying indicators detailing why an incident occurred. Identifying contributing factors can help determine long-term preventative actions. See also "Cause," "Direct Cause."
Control Measures	See "Hazard Controls."

Controlled Environment	In relation to a workplace, an environment where the Government of Alberta can control a hazard (e.g., poor indoor lighting). See also “Environment,” “Uncontrolled Environment.”
Controlled Product	A product indicated in the Hazardous Products Act and classified in the Controlled Products Regulations. See also “Product.”
Controls	See “Hazard Controls.”
Dangerous Good	A product, substance or organism identified and classified in the Transportation of Dangerous Goods Act and Regulations. See also “Accidental Release,” “Dangerous Goods Accident,” “Dangerous Goods Incident,” “Imminent Accidental Release,” “Incident.”
Dangerous Goods Accident	An occurrence associated with and related to the transport of dangerous goods by air that results in fatal or serious injury to a person or in major property damage. See also “Accidental Release,” “Dangerous Good,” “Dangerous Goods Incident,” “Imminent Accidental Release,” “Incident.”
Dangerous Goods Incident	An occurrence (other than a dangerous goods accident) associated with and related to the transport of dangerous goods by air, not necessarily occurring on board an aircraft, that results in injury to a person, property damage, fire, breakage, spillage, leakage of fluid or radiation, or other evidence that the integrity of the packaging has not been maintained. Any occurrence relating to the transport of dangerous goods that seriously jeopardizes an aircraft or its occupants is also deemed to be a dangerous goods incident.

	See also “Accidental Release,” “Dangerous Good,” “Dangerous Goods Accident,” “Dangerous Goods Occurrence,” “Imminent Accidental Release,” “Incident.”
Dangerous Goods Occurrence	For purposes of reporting, an Accidental Release, Imminent Accidental Release, Dangerous Goods Accident or Dangerous Goods Incident. See also “Accidental Release,” Imminent Accidental Release” “Dangerous Good,” “Dangerous Goods Accident,” “Dangerous Goods Incident.”
Defective Equipment	Equipment that: • is in a condition that compromises the health and safety of the employee using or transporting it • will not perform the function for which it is intended or was designed • is not strong enough for its purpose • has obvious defects
Degree of Risk	The chance of injury or loss from a hazard is determined by the following formula: Frequency of exposure to the hazard x Incident probability (likelihood that exposure will result in loss) x Probable consequence (severity of the resulting loss) See also “Risk Classification.”
Department	A business unit established by the Lieutenant Governor in Council under the Government Organization Act. See also “Ministry.”
Direct Cause	The immediate cause of why an incident occurred. See also “Cause,” “Contributing Factors.”

Direct Supervision	Under the supervision of a competent employee who is personally and visually supervising an employee and is able to communicate readily and clearly with that employee.
Directive	The documented principles established by Public Service Commission.
Document	See “Record.”
Documentation Review	Part of a health and safety audit, a documentation review determines if an employer has the required written policies, plans and procedures in place, and if adequate records are being kept.
Due Diligence	The level of judgment, care, prudence, determination and activity that a person would reasonably be expected to show under particular circumstances. Due diligence requires a person to take every reasonably practicable precaution in the circumstances for the protection of the health and safety of employees. It is the level of safety that is expected, provided and practiced by employees, supervisors and managers, as well as others working for the Government of Alberta, to complete work without loss.
Element	A part of the Government of Alberta Occupational Health and Safety Program. An element may contain parts called components. See also “Component,” “Occupational Health and Safety Program.”
Emergency	Actual or potential danger where the loss of human life or property is imminent and where immediate response is required to reduce the risk and the probable consequence of an incident. See also “Human Emergency,” “Natural Emergency,” “Technological Emergency.”

Emergency Response Plan	A written document for a workplace that includes the following: • the identification of potential emergencies • procedures for dealing with the identified emergencies • the identification of, location of and operational procedures for emergency equipment • emergency response training requirements • the location and use of emergency facilities • the fire protection requirements • the alarm and emergency communication requirements • the first aid services required • procedures for rescue and evacuation • the employees designated for rescue and evacuation
Employee	Anyone who works for the Government of Alberta and is included in the Public Service Act (e.g., senior managers, managers, supervisors and employees, including wage employees and employees with Contracts of Employment or Fee for Service). Volunteer worker for purpose of OH&S Safety Program See also "Employer."
Employer	An employer may be any of the following: • a person who is self-employed in an occupation • a person who employs one or more employees • a person designated by the employer as the employer's representative • a director or officer of a corporation who oversees the occupational health and safety of that corporation's employees Great Divide Trail Association Board and volunteers executing an organizational role of responsibility on their behalf
Engineering Control	This type of control is the preferred method of hazard control because it may eliminate a hazard by modifying the equipment, chemical or process, or by substituting, isolating, enclosing, guarding or ventilating the hazard.

	See also “Hazard Controls.”
Environment	The surrounding conditions, influences and forces to which an employee is exposed at the workplace. See also “Controlled Environment,” “Uncontrolled Environment.”
Equipment	Something that equips employees at a workplace, including tools supplies, machinery and sanitary facilities.
Ergonomics	The applied science that studies the interaction between people and the work environment. The focus of ergonomics is to make the job fit the employee.
Environmental Release	For the purpose of reporting, the release of a substance into the environment that may cause, is causing, or has caused an adverse effect. See also “Adverse Health Effect.”
Excessive Noise	Noise volumes that exceed 85 dBA_{Lex} and Occupational Exposure Limits in Schedule 3, Table 1 of the Occupational Health and Safety Code.
Explosives Incident	An unplanned or uncontrolled explosion.
Exposed Employee	In relation to harmful substances, an employee who may reasonably be expected to work in a restricted area at least 30 workdays in a 12-month period. See also “Harmful Substance.”
Fall Protection System	A personal fall arrest system, a travel restraint system, a safety net, a control zone or another system approved by an Alberta Labor designated Director of Inspection.
Fatality	An incident that results in the death of an employee.

	See also “Serious Incident.”
Field Work	Work performed away from the employee’s base workplace and is a normal or regular part of the position’s assigned duties.
First Aid	Treatment to sustain life, to prevent a condition from becoming worse and to promote recovery.
First Aid Certificates	Certificates awarded by approved training agencies in accordance with Part 11 of the Occupational Health and Safety Code. There are three certificates: • Emergency First Aid Certificate • Standard First Aid Certificate • Advanced First Aid Certificate
First Aid Incident	An incident that resulted in an injury requiring first aid treatment only. The services of a physician (or licensed medical practitioner) were not required and/or no work time was lost by the injured employee beyond the shift or day of the incident. See also “First Aid,” “Incident.”
First Aider	A person with a certificate from an approved training agency who gives immediate and temporary care to an injured or ill person at a workplace using available equipment, supplies, facilities or services. See also “First Aid.”
Form	A required, standardized document completed in accordance with a standard process of the Government of Alberta Occupational Health and Safety Program (e.g., Supervisor Incident Investigation Report, Hazard Assessment and Control Report). The Government of Alberta uses forms to facilitate the consistent recording of information. See also “Template.”

Formal	Written and documented. A formal process includes using a checklist or form in workplace inspections, audits, incident reporting and investigations, training records, and Health and Safety Committee meeting minutes.
Frequency Rate	See “Injury Frequency Rate.”
Function	There are five functions: Prime Contractor, Contractor, Employer, Supplier and Employee.
Government of Alberta	Includes all departments, agencies, boards and commissions whose employees are appointed and administered under the Public Service Act. See also “Department,” “Ministry.”
Guideline	The recommended approach, steps or tasks that describe how to complete or implement a standard within an element or component in the Government of Alberta Occupational Health and Safety Program. See also “Standard Process.”
Harmful Substance	A substance that, because of its properties, application or presence, creates or could create a danger, including a chemical or biological hazard, to the health and safety of an employee exposed to it.
Hazard	A condition or behaviour that has the potential to cause injury or loss. Hazards may be physical, chemical, biological or psychological. See also “Biological Hazard,” “Chemical Hazard,” “Health Hazard,” “Physical Hazard,” “Psychological Hazard,” “Safety Hazard.”
Hazard Assessment	A process used to identify the health and safety hazards and evaluate the risk associated with job tasks.

Hazard Controls	Measures designed to eliminate or reduce the risk of hazards and to eliminate or control loss. See also “Engineering Control,” “Administrative Control,” “Personal Protective Equipment.”
Hazard Level	See “Risk Classification.”
Hazardous Act	An action or behaviour taken or failed to be taken that could result in loss.
Hazardous Condition	A physical state of a facility, vehicle, equipment, environment, procedure, training course, etc. that could result in loss.
Hazardous Energy	Electrical, mechanical, hydraulic, pneumatic, chemical, nuclear, thermal, gravitational or any other form of energy that could cause injury. The injury could arise from unintended motion, energizing or the start up or release of such stored or residual energy in machinery, equipment, piping, pipelines or process systems.
Hazardous Material	See “Harmful Substance.”
Hazardous Work	See “High Hazard Work,” “Medium Hazard Work,” “Low Hazard Work.”
Health and Safety Concern	An employee’s perception of a hazardous act or condition; a matter of interest in the Government of Alberta Occupational Health and Safety Program or its implementation or operation. See also “Concern,” “Health and Safety Issue,” “Health and Safety Program.”
Health and Safety Issue	An employee health and safety concern validated by a Workplace Health and Safety Contact or by a Health and Safety Committee as per Issue Resolution within the Government of Alberta Occupational Health and Safety Program.

Health and Safety Management System	See “Occupational Health and Safety Program.”
Health and Safety Program	See “Occupational Health and Safety Program.”
Health and Safety System	See “Occupational Health and Safety Program.”
Health Care Facility	A hospital, medical clinic or physician’s office that can dispense emergency medical treatment during the time employees are at a workplace.
Health Hazard	A physical, chemical, biological or psychological hazard that may cause acute or chronic health effects in exposed employees (e.g., noise, dust, heat, ergonomics, etc.). See also “Hazard,” “Safety Hazard.”
Hearing Protection Device	See “Hearing Protectors.”
Hearing Protectors	Personal protective equipment worn by an employee to reduce his or her exposure to noise volume or frequency (e.g., ear plugs, ear muffs).
High Hazard Work	Work where most of the primary tasks have a high risk classification, and where an employee performs those tasks in an uncontrolled environment. Examples of high hazard work: • field work involving investigation, enforcement or apprehension • field work handling wild animals • working alone in the field doing monitoring or inspection for compliance purposes • working alone at isolated locations using powered equipment • counseling unpredictable or troubled people or people with a history of violence in Government of Alberta offices • institutional care, custody or control of people • food processing

	• biological or chemical laboratory analysis or research • construction and trade work performed outside See also “Hazardous Work.”
High Risk Work	See “High Hazard Work.”
Highway	Any thoroughfare, street, road, trail, avenue, parkway, driveway, viaduct, lane, alley, square, bridge, causeway, trestle way or other place or any part of any of them, whether publicly or privately owned, that the public is ordinarily entitled or permitted to use for the passage or parking of vehicles.
Human Emergency	May be accidental or hostile, including chemical spills, leaks, emissions, fires, explosions, transportation incidents (e.g., automobile, airplane, train and boat), riots, acts of terrorism and workplace violence. See also “Emergency.”
Imminent Accidental Release	An accidental release is imminent for dangerous goods in transport in a large means of containment, if there has been an incident and any of the following conditions exist: • There is likely to be a need to remove or transfer all or a portion of the dangerous goods to another large means of containment. • There is damage to the means of containment which, if not corrected, could result in an accidental release of the dangerous goods in a quantity or emission level that exceeds those set out in the table to subsection 8.1(1) of Part 8, Accidental Release and Imminent Accidental Release Report Requirements. • The large means of containment is lost in navigable waters. See also “Accidental Release,” “Dangerous Good,” “Dangerous Goods Accident,” “Dangerous Goods Incident,” “Incident.”
Imminent Danger	In relation to any occupation, an imminent danger is either: • a danger that is not normal for that occupation

	• a danger under which a person engaged in that occupation would not normally carry out the work
Incident	An undesired, unplanned, unexpected event that results in, or has the potential to result in, physical harm to a person or damage to property (with or without loss). Incidents are of the following types: • Aviation Accident • Aviation Incident • Dangerous Goods Accident • Dangerous Goods Incident • Dangerous Goods Accidental Release • Dangerous Goods Imminent Accidental Release • Environmental Release • First Aid • Lost Time • Medical Aid • Near Miss • Personal Property Damage • Property Damage • Radiation Overexposure
Incident Investigation	The process of systematically gathering and analyzing information to identify the causes of an incident, and of making recommendations to prevent a similar incident from happening in the future.
Injury Frequency Rate	The number of compensable injuries per 100 employees for the year. Equal to: $\frac{\text{(number of compensable injuries) x 200,000 hours}}{\text{total annual hours worked}}$
Injury Severity Rate	The number of work days lost per 100 employees for the year. Equal to: $\frac{\text{(number of work days lost) x 200,000 hours}}{\text{total annual hours worked}}$
Inspection	A planned, systematic evaluation or examination of an activity or workplace, checking or testing against established standards to identify hazards and to recommend corrective action.

Interview	Part of a health and safety audit. An interview is used to gather and verify information about an organization's health and safety system. Includes either a formal discussion using standard questions or a questionnaire.
Isolate	Use a mechanical device to restrain, regulate, direct or dissipate hazardous energy.
Job	A total complement of tasks performed by an employee. See also "Occupation Inventory."
Job Hazard Analysis	See "Task Hazard Assessment."
Job Inventory	See "Work Inventory."
Job Safety Analysis	See "Task Hazard Assessment."
Legislation	Provincial or federal government standards in the form of written acts, regulations and codes.
Lost Time	An incident that results in an injury requiring treatment by a physician or licensed medical practitioner, and because of which the injured employee loses work time beyond the shift or day of the injury. See also "Incident."
Low Hazard Work	Work where most tasks are performed in controlled environments and most hazards are classified as medium and low risk. Examples of low hazard work: • administrative • clerical • records management • visitor or informational services See also "Hazardous Work."

Low Risk Work	See “Low Hazard Work.”
Maintenance Audit	A formal health and safety evaluation conducted to maintain a Certificate of Recognition. See also “Audit.”
Manager	A person accountable for the health and safety of the work performed at a workplace. See also “Workplace Manager.”
Materials Handling	Lifting, lowering, pushing, pulling, carrying, handling or transporting materials.
Medical Aid Incident	An incident that results in an injury requiring treatment by a physician or licensed medical practitioner, and because of which the injured employee loses no work time beyond the shift or day of the incident.
Medium Hazard Work	Work where the primary tasks are performed in controlled environments and have hazards classified as medium and low risk. Medium hazard work may include some tasks with hazards classified as high risk that are performed in uncontrolled environments. Examples of medium hazard work: • material handling • the operation of powered mobile equipment • equipment repair • driving, travel or transportation to external locations for business, conferences or instruction See also “Hazardous Work.”
Medium Risk Work	See “Medium Hazard Work.”
Ministry	Comprises departments established by the Lieutenant Governor in Council, as well as agencies, boards and commissions established by a minister to act in an advisory or

	administrative capacity under the Government Organization Act.
Motor Vehicle	A vehicle propelled by any power other than muscular power, or a moped, but does not include a bicycle, a power bicycle, an aircraft, an implement of husbandry or a motor vehicle that runs only on rails. A device in, on or by which a person or thing may be transported or drawn, including a combination of vehicles.
Natural Emergency	Severe storms (e.g., thunder, lightning, wind, snow, ice), tornadoes, floods, earthquakes, drought, hurricanes, lightning-caused wild fires, viral outbreaks, epidemics, etc. See also “Emergency.”
Near Miss	An incident that had the potential to cause personal injury but did not.
Noise Exposed Employee	An employee exposed to noise in excess of the noise exposure limits in Schedule 3, Table 1 of the Occupational Health and Safety Code.
Observation	Part of a health and safety audit designed to allow an auditor to observe and verify specific conditions and practices at a workplace.
Occupation Inventory	A form listing all occupations and individual jobs performed at a workplace. See also “Job.”
Occupational Health and Safety Program	A set of interrelated elements that together form the whole administrative and procedural plan for identifying hazards, implementing controls and maintaining their effectiveness. The Government of Alberta Occupational Health and Safety Program includes the following elements: 1. Occupational Health and Safety Management 2. Hazard Management

	3. Occupational Health and Safety Training 4. Inspections 5. Emergency Preparedness 6. Incident Management 7. Occupational Health and Safety Program Evaluation
Operation	The primary work of a business unit or the nature of work within a department (e.g., construction, safety consulting, planning, auditing, administration, etc.).
Partnerships in Injury Reduction	PIR (abbreviation). A provincial program in Alberta to promote health and safety through partnerships with safety associations, industry groups, educational institutions and labour organizations. See also “Audit,” “Certificate of Recognition,” “Certifying Partner.”
Personal Property Damage	Loss or damage to an employee’s personal property (e.g., clothing, eye glasses, false teeth, prosthetic device) worn at the time of the incident.
Personal Protective Equipment	PPE (abbreviation). Equipment used or clothing worn by a person (e.g., gloves, safety glasses, fall protection, etc.) for protection from health or safety hazards associated with conditions at a workplace. Personal protective equipment is used when engineering or administrative methods cannot fully control the hazards. Personal protective equipment does not directly control the hazard, but it reduces the employee’s exposure to the hazard when maintained and used correctly. Often referred to as “the last line of defense.” See also “Hazard Controls.”
Physical Hazard	A hazard arising from slipping, tripping, being struck by or against, falling, pinch points, being caught in, under or between, lifting, pushing, pulling, ergonomic conditions (bodily reaction injuries), heat, cold, vibration, noise, ionizing radiation (x-rays, gamma rays, beta rays, beta particles), non-ionizing

	radiation (microwaves, radio waves, infra-red, lasers, ultra-violet), etc. See also “Hazard.”
Policy	The documented principles and standards established by departments.
Powered Mobile Equipment	A self-propelled machine or combination of machines, including a prime mover or motor vehicle, designed to manipulate or move material or to provide a powered aerial device for employees.
Prime Contractor	The contractor, employer or other person who enters into an agreement with the owner of the workplace to be the prime contractor. The owner of the workplace is the prime contractor if no agreement is in force. Every workplace must have a prime contractor if two or more employers are involved in work at the workplace.
Product	In addition to restricted, controlled and prohibited products, products also include pesticides, cosmetics, foods or drugs, hazardous waste, wood, wood products and manufactured articles. See also “Restricted Product,” “Controlled Product,” “Prohibited Product.”
Professional	A person who is adequately qualified, is suitably trained, has sufficient experience in occupational hygiene and is eligible for membership in one of the following: • American Board of Industrial Hygiene • Canadian Registration Board of Occupational Hygienist • Council on Certification of Health, Environmental and Safety Technologist
Prohibited Product	A product not advertised or permitted for sale in Canada under the Hazardous Products Act.

	See also “Product.”
Property Damage	Loss or damage to any owned or leased Government of Alberta property as a result of an incident.
Psychological Hazard	Stress, anxiety, depression and other behavioural health conditions. See also “Hazard.”
Qualification Audit	A formal health and safety evaluation conducted by an auditor candidate who is pursuing auditor certification. See also “Audit.”
Radiation Incident	An incident that has the potential to cause overexposure of a person to radiation.
Radiation Overexposure	The exposure of a person, other than a patient undergoing medical examination or treatment, to radiation in excess of the maximum exposure limit of that form of radiation.
Record	Employer records retained on file include completed forms, checklists, reports, memos and minutes. Records create a history of events and activities used in the operation and maintenance of a health and safety program.
Regulations	Any legislated requirements.
Responsibility	One’s duty to do what is assigned, expected and understood.
Restricted Area	An area of a workplace where a reasonable chance exists that the airborne concentration of asbestos, silica, coal dust or lead exceeds or may exceed the occupational exposure limit.
Restricted Product	A consumer product indicated in the Hazardous Products Act and classified in the Consumer Chemicals and Containers Regulations.

	See also “Product.”
Risk	See “Degree of Risk.”
Risk Classification	The degree of risk is converted to a high, medium or low risk classification, which indicates the priority for implementing hazard control measures or evaluating existing controls. See also “Degree of Risk.”
Root Cause	See “Cause.”
Routes of Entry	The ingestion, inhalation, injection or absorption of a chemical or biological hazard.
Safe Job Procedure	See “Safe Work Procedure.”
Safe Operating Procedure	See “Safe Work Procedure.”
Safe Work Practice	A written guideline that helps in the safe performance of a task that may not always be done in a specific way.
Safe Work Procedure	Written, step-by-step instruction required to safely perform a task from beginning to end, including the use of tools and operation of equipment. See also “Code of Practice.”
Safeguard	A guard, shield, guardrail, fence, gate, barrier, toe board, protective enclosure, safety net, handrail or other device designed to protect employees operating equipment or machinery. Does not include personal protective equipment.
Safety Hazard	A substance, process, action or condition that may immediately endanger employees (e.g., chemical burns, shear points, slips and falls, etc.). See also “Hazard,” “Health Hazard.”

Serious Incident	An incident that results in: • fatality • an injury or accident requiring an employee's admission to a hospital for more than two days • an unplanned or uncontrolled explosion, fire or flood that causes or has the potential to cause a serious injury • the collapse or upset of a crane, derrick or hoist • the collapse or failure of any component of a building or structure necessary for the structural integrity of that building or structure
Severity Rate	See "Injury Severity Rate."
Site Familiarization	A brief, escorted tour or discussion to allow an auditor to become familiar with a workplace and any areas requiring special caution.
Standard	The requirements and responsibilities outlined for implementation of the Government of Alberta Occupational Health and Safety Program. See also "Guideline," "Standard Process."
Standard Operating Procedure	See "Safe Work Procedure."
Standard Process	The required approach, steps or tasks that describe how to complete or implement a component or element within the Government of Alberta Occupational Health and Safety Program.
Supervisor	Anyone with the authority to direct the activities of another person.
Supplier	A person who rents, leases, erects, installs or provides any tools, appliances or equipment, or who sells or otherwise provides any designated substance or hazardous material to be used by an employee in respect of any occupation, project or workplace. In respect to a controlled product, the supplier is a

	manufacturer, processor or packager of the controlled product or a person who, in the course of business, imports or sells controlled products.
Task	A segment of work that requires a set of specific actions for completion.
Task Analysis	See “Task Hazard Assessment.”
Task Hazard Assessment	A systematic breakdown of a task within a job into the step by step actions followed to complete the task, for the purpose of identifying all the hazards within the steps.
Task Inventory	A form on which all the tasks performed in an occupation or an individual job are listed.
Team Audit	Where more than one auditor participates in an audit. See also “Audit.”
Technological Emergency	May be human caused but technology related, including communication failures, utility or power outages, engineering design or material failures related to structures or equipment (e.g., structural collapse), and biological, chemical and pollution incidents. See also “Emergency.”
Telecommuting	Using information technologies (such as telecommunications and computers) for work purposes to replace travel requirements.
Telework	See “Telecommuting”.
Template	A document with recommended content and format that may be completed as is or modified by managers to meet their needs in accordance with a guideline of the Government of Alberta Occupational Health and Safety Program (e.g., inspection checklists, emergency response plans, etc.).

	See also “Form.”
Travel Status	An employee is away from their place of residence and their work location on approved travel for government business purposes; or when an employee is travelling for government business that necessitates overnight accommodation away from their place of residence.
Uncontrolled Environment	In relation to a workplace, an environment where the Government of Alberta can’t directly control a hazard (e.g., weather conditions). See also “Controlled Environment,” “Environment.”
Unsafe Act	See “Hazardous Act.”
Unsafe Condition	See “Hazardous Condition.”
Vehicle	A device in, on or by which a person or thing may be transported or drawn, including a combination of vehicles.
Violence	Threatened, attempted or actual conduct of a person that causes or is likely to cause physical harm.
Visitor	Any person present at a workplace who does not regularly work at that workplace.
Work	Tasks performed by an employee for the GDTA.
Worker	A person engaged in an occupation.
Work Area	A place at a workplace where an employee is, or may be, during work or during a work break.
Work Inventory	A comprehensive list of tasks produced from a systematic review of all jobs or work carried out at a workplace.

Work Location	Any point within the metropolitan area or within 25 km of their central place of work or place of residence.
Workplace	A general location where employees or an employee works, such as a building, facility, business unit (i.e., branch, area or region) or work site within a business unit. See also "Administrative Workplace," "Business Unit," "Work site."
Workplace Manager	The most senior manager at a workplace or a designated manager assigned a specific health and safety responsibility for the workplace. See also “Manager.”
Work site	A location where an employee is, or is likely to be, engaged in any occupation. A work site includes any vehicle or mobile equipment used by an employee in an occupation.

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ABBREVIATIONS

AASP	Alberta Association of Safety Partnerships
ASC	Alberta Safety Council
ANSI	American National Standards Institute
APS	Alberta Public Service; Government of Alberta
ASSE	Alberta Society of Safety Engineers
BSI	British Standards Institute
CASE	Certificate of Achievement in Safety Excellence

CCOHS	Canadian Centre for Occupational Health and Safety
CGSB	Canadian General Standards Board
COR	Certificate of Recognition
CSA	Canadian Standards Institute
CCOHS	Canadian Centre for Occupational Health and Safety
CSSE	Canadian Society of Safety Engineering
EIIR	Employer Incident Investigation Report
ERP	Emergency Response Plan
FOIP	Freedom of Information and Protection of Privacy Act
ISO	International Standards Organization
JWHSC	Joint Workplace Health and Safety Committee
MSDS	Material Safety Data Sheet
NIOSH	National Institute of Health and Safety
NFPA	National Fire Protection Association
OEL	Occupational Exposure Limit
OHS (OH&S)	Occupational Health and Safety
OSHA	Occupational Safety and Health Association
PPE	Personal Protective Equipment
QA	Quality Assurance

SDS	Safety Data Sheet
SIIR	Supervisor's Incident Investigation Report
SWP	Safe Work Practice; For tasks frequently performed by GDT volunteers
UL	Underwriters' Laboratory
ULC	Underwriters' Laboratories of Canada
WCB	Workers' Compensation Board
WHMIS	Workplace Hazardous Materials Information System (1998 or 2015)

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