



BUCKET LIST FOR LAND RECLAMATION PROFESSIONALS

Things to try to do over the course of your career.
Track and classify experiences as exposure to, proficient at, or mastery of.

Landscape

- Identify and map current land use
- Identify and map suitable post reclamation land use
- Identify and map landforms
- Delineate a watershed and its streams
- Determine legal land description of a site
- Determine GPS coordinates for a site
- Obtain and interpret air photo and satellite imagery for a site

Soils

- Sample with an auger
- Sample with a drilling rig
- Log a drill core
- Characterize a saline soil
- Characterize a sodic soil
- Characterize permafrost
- Manage or mitigate soil compaction
- Map a site
- Conduct hand texturing
- Build an anthroposol

Hydrology

- Measure soil water in the field
- Measure infiltration rate in the field
- Sample ground water
- Sample water from a lake or stream
- Manage a contaminated water body
- Manage contaminated ground water

Vegetation

- Assess plant species composition
- Develop a weed management plan
- Determine legislative status of target species (threatened, endangered, etc)
- Use a plant key to identify vascular species in a community
- Use a plant key to identify non vascular species in a community
- Do a rare plant species survey
- Transplant or seed some native species

Microbiology

- Take aseptic samples for microbial assessment
- Conduct bioremediation work
- Pilot test a bioremediation process

Fauna

- Assess habitat of a target species
- Restore habitat of a target species
- Monitor utilization by a target species
- Determine legislative status of target species (threatened, endangered, etc)

Laboratory

- Submit samples for laboratory analyses
- Conduct your own laboratory analyses for a project
- Interpret laboratory analyses and identify follow-up action

Field

- Reclaim a pipeline
- Reclaim an open pit mine
- Reclaim an under ground mine
- Reclaim a well site and/or battery
- Reclaim a contaminated site
- Reclaim an urban site
- Reclaim an agricultural site
- Reclaim an industrial plant site
- Reclaim industrial land
- Reclaim a quarry

Geography

- Reclaim a wetland site
- Reclaim a tundra site
- Reclaim a prairie site
- Reclaim a forest site
- Reclaim a desert site
- Reclaim a tropical site
- Reclaim in different regulatory jurisdictions
- Work on an international reclamation project

Design

- Design a plant community
- Design a soil profile for an anthroposol
- Design a monitoring program
- Contribute to a landform design
- Contribute to a mine closure plan
- Identify and incorporate traditional ecological knowledge into a design
- Design a fertilizer mix
- Design a revegetation seed mix

Legislation and Policy

- Read current municipal, provincial and federal legislation relevant to reclamation
- Suggest improvements to existing reclamation legislation and policies
- Contribute to the creation of new reclamation legislation or policies
- Develop a risk management plan

Regulatory System

- Identify the type (name) of activity under various legislation
- Determine project authorization type and number(s) for an activity
- Determine public land disposition type(s) for a site
- Contribute to an environmental impact assessment
- Contribute to a regulatory authorization
- Contribute to a reclamation liability or security estimate

Stakeholders

- Consult with landowners
- Consult with aboriginal groups
- Consult with people downstream
- Consult with people upstream
- Consult with recreational space users
- Consult with end land users
- Consult with an environmental non-government organization

Project Planning

- Plan a soil survey
- Plan a Phase I, II and III survey
- Plan a vegetation survey
- Plan a rare plant survey
- Plan a wildlife survey
- Plan a hydrological survey
- Plan a hydrogeological survey
- Place a laboratory order for analyses of a set of soil, water or vegetation samples
- Plan a project from beginning to end
- Plan a multi disciplinary, multi year, long term project

Project Management

- Design a research study
- Write a research proposal
- Write a technical proposal
- Develop and track a project budget
- Manage a project from start to finish
- Facilitate a large meeting or workshop that includes groups with different interests and wanting different outcomes
- Participate in an organizing committee
- Talk to and learn about the roles of other members of a project team (engineer, accountant, lawyer, etc)
- Participate in a public meeting or public consultation
- Participate in a regulatory hearing (Alberta Energy Regulator, Alberta Utilities Commission, Natural Resources Conservation Board, Canadian Environmental Assessment Agency)
- Attend or participate in an Environmental Appeals Board hearing
- Rescue a project that is out of funds
- Rescue a project that has stalled or failed due to conflict

Professional Development

- Read a reclamation research paper every month
- Do an oral presentation at a conference
- Present a poster at a conference
- Help organize a conference
- Sponsor a component of a conference
- Chair a session at a conference
- Become a member of the Canadian Land Reclamation Association executive (national or provincial chapter)
- Publish in a trade journal
- Publish in a peer reviewed journal
- Teach a class or session at a kindergarten, grade school, junior high, high school, college or university
- Hire a student (summer, intern, co-op)
- Supervise or mentor a student
- Supervise or mentor a junior colleague
- Develop or support a reclamation scholarship program
- Mediate a dispute
- Volunteer to work on a reclamation project for a protected area
- Be qualified as an expert in a judicial or quasi-judicial proceeding