

INTRODUCTION: ARCTIC REVEGETATION (Steve McKendrick)

- Objective
 - Establish plant communities similar to the surrounding tundra

- Current Practice
 - Fertilizer, seed, transplant, sod
 - Recommendations usually specific for habitat type/conditions and mitigation concerns
 - Seed
 - Native grass cultivars
 - Suited for moist and dry habitats of mineral, organic, and sandy/gravelly soils.
 - Ideally, non-competitive and short-lived
 - Potential monoculture; non-natural appearance
 - Generally readily available source of seed for purchase
 - Climax species (indigenous species)
 - Limited quantity—specific collection effort
 - Forbs—precedence on gravel restoration
 - Wetland species—early applied trials
 - Transplants
 - Used primarily on wet and shallow water habitats
 - Immediate source of climax species
 - Labor intensive
 - Sod
 - Immediate natural cover of live tundra plant communities
 - Thermal protection for permafrost
 - Limited material source availability
 - Labor intensive
 - Fertilizer
 - Phosphorous is typically the primary limiting plant available nutrient
 - Additional macro nutrients may be warranted based on seed/transplant approach

- Challenges
 - Thermokarst
 - Difficult to predict and appropriately plan for

- May take several seasons to recognize how/what habitat conditions will develop/persist
- Season
 - Limited summer access
 - Rehabilitation activities could exacerbate existing impact
 - Important to recognize that no-action may be the most appropriate course
- Expectations
 - Arctic rehabilitation (natural or assisted) is a slow process