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Clearing the Way for Salmon Habitat: A Proven Method to Remove Reed Canary Grass Before Restoration

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Reed Canary Grass

- Wide ecological range
- Perennial and rhizomatous
- Common in riparian systems
- Forms dense mats that can be 6 -7 ft tall
- All parts of the plant float – easy dispersal
- Reproduces from seeds, rhizomes, and stem fragments (‘rooting at the node’)

Ecological Impacts

- Quickly displaces native vegetation
- Prevents establishment of restoration species
- Bank destabilization = erosion and slumping = stream widening
- Inc stream sedimentation
- Can block fish passage
- Higher stream temperatures & reduced oxygen

Standard ‘restoration practices’

- Screef an area, plant, use cardboard & mulch
- Very low survival
- Survival of 22 species (n=4668) averaged 7%
- 11 of the species had 0% survival (Hovick & Reinartz, 2007)

Materials Needed

- 1/8” steel flat bar * 6”
  - Rhizome barrier
  - Reusable forever
- 14 or 18oz PVC vinyl
  - Reusable for at least 10 years
  - Lightweight yet durable
  - Fish friendly

Tranquille Wetlands

- Uncontrolled section of Thompson River
- Seeded to reed canary grass in the 1950s

Methods - Fall 2022

- Mowed site – all material placed under barrier
- 4 strips @ 10*60 ft
- 15 cm deep perimeter edging
- Lots of rocks and to secure barrier

Fall 2023
(1 Year Treatment)

20 soil blocks removed

2 permanent transects with 12 quadrats/transect

Half site planted/half site unplanted

July 2024
Water receding after spring freshet

Fall 2024
One year later

- Willow has colonized the dry end (25 ft)
- Assortment of annuals in mid-moisture region
- Wet zone is dominated by rushes and water smartweed
- Reed canary grass is reinvading middle zone area

Average % cover of dominant naturally recolonizing species across planted and unplanted areas

	Dry	Moist	Wet
Interior willow	21%	0%	0%
Water smartweed	0%	0%	20%
Soft-stem bulrush	0%	0%	18%
Bidens frondosa	11%	16%	11%
Reed canary grass	15%	53%	25%

Dry
Willow Dominated

- Willow expanded dramatically in this zone
- The flood zone may not have reached this area

Moist
Greatest diversity

- This section flooded 3 times this summer.
- Therefore, the greatest RCG deposition
- Most of the species were fast growing annuals

Wet Rushes

- Area dominated by soft-stem rush, bidens, and water smartweed
- This area likely flooded once and stayed flooded till the end of the season.

What about the transplants? Not just survived – but thrived!

Species	Common	Survival
Euthamia occidentalis	Western goldenrod	Excellent (>95%)
Solidago lepida	Canada goldenrod	Good (>85%)
Symphotrichum sp	Aster sp	Excellent (>95%)
Apocynum cannabinum	Hemp dogbane	Excellent (>95%)
Physostegia parviflora	Western false dragonhead	Fair-Good (>70%)

All species did best in the top 2/3 of the plot

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Thank you to our project partners:

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There's so much RCG Where do I Start??