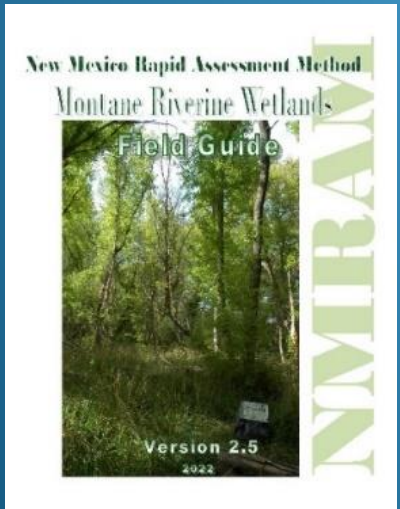
New Mexico Environment Department

# New Mexico Rapid Assessment Method (NMRAM)

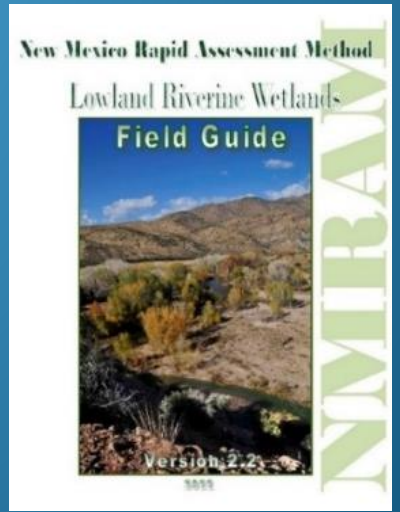
## *Riverine Wetlands*

# Channel Mobility




New Mexico Environment Department
Surface Water Quality Bureau
Wetlands Program

Natural Heritage New Mexico
University of New Mexico



# Channel Mobility (Lowland)

- **Definition:** Channel Mobility is an assessment of the dynamic capacity of a channel to laterally migrate or avulse, leading to the development of a dynamic patch mosaic of fluvial landforms that support wetland and riparian communities.

- **Rationale**: A guiding principal of underlying riverine ecosystem health is the maintenance of a dynamic riverscape of shifting ecological communities on a changing fluvial geomorphic template that is driven by hydrological processes. Critical to maintaining this dynamism is a capacity for lateral channel migration and avulsions.

# Channel Mobility (Lowland)

- Measured at bank edge of each transverse (Upper, Middle, Lower)
- Estimate the percent absolute cover of each of the mobility elements listed on Worksheet 14
  - 50m up- and down-stream on both banks
    - SA bank and opposite bank
  - Exotic Woody Cover %
    - Russian olive, saltcedar, other
  - Artificial Stabilization Features % at Bank Edge
    - Jetty Jacks, constructed levees, Rip Rap/Concrete, other
  - For each 50 m segment sum total cover of all elements
  - Average
  - Rate using Table A6

# Channel Mobility (Lowland)

## Worksheet 14

- Woody Cover and artificial stabilization items must not exceed 100% per bank segment even if stabilization covers overlap

**A6 - Channel Mobility**

**Worksheet 14. Channel Mobility.** Enter % cover of stabilizing elements on SA Bank and opposite bank (Opp) looking 25m upstream and downstream from channel edge of each segment. If "Other" is chosen for stabilizing element, please specify in the Abiotic Metric Comments below. Total % cover per bank should not exceed 100%. Average % bank cover for each segment, and then for the SA. Rate using Table A6 and enter rating on SA Summary Worksheet.

| Stabilizing Element | Upper Segment | | Middle Segment | | Lower Segment | |
|---|---|---|---|---|---|---|
| **Exotic Woody Cover (%)** | SA Bank | Opp Bank | SA Bank | Opp Bank | SA Bank | Opp Bank |
| Russian olive | | | | | | |
| Saltcedar | | | | | | |
| Other | | | | | | |
| **Artificial Stabilization Features (%) at Bank Edge** | SA Bank | Opp Bank | SA Bank | Opp Bank | SA Bank | Opp Bank |
| Jetty Jacks | | | | | | |
| Constructed Levees | | | | | | |
| Rip Rap/Concrete | | | | | | |
| Other | | | | | | |
| **Total % Cover per Bank** | | | | | | |
| **Average % Bank Cover per Segment** | | | | | | |
| **Average % Bank Cover all Segments** | | | | | | |

**Table A6. Channel Mobility**

| Rating | Description |
|---|---|
| ◯ 4 | <10% channel stabilized: most of the channel has the capacity to migrate under high flows |
| ◯ 3 | ≥10%-<25% channel stabillized. |
| ◯ 2 | ≥25%-<50% channel stabilized. |
| ◯ 1 | ≥50% channel stabilized. Little or no opportunty for channel migration. The channel is artificially hardened, covered by dense exotic woody cover, or covered in concrete on the SA side and opposite banks. |

# Channel Mobility (Lowland)

Example SA:

Tingley Beach 2019

- Although total cover of stabilizing elements was overlapping in many segments, total for any given segment does not exceed 100%

**A6 - Channel Mobility**

**Worksheet 14. Channel Mobility.** Enter % cover of stabilizing elements on SA Bank and opposite bank (Opp) looking 25m upstream and downstream from channel edge of each segment. If "Other" is chosen for stabilizing element, please specify in the Abiotic Metric Comments below. Total % cover per bank should not exceed 100%. Average % bank cover for each segment, and then for the SA. Rate using Table A6 and enter rating on SA Summary Worksheet.

| Stabilizing Element | Upper Segment | | Middle Segment | | Lower Segment | |
|---|---|---|---|---|---|---|
| **Exotic Woody Cover (%)** | SA Bank | Opp Bank | SA Bank | Opp Bank | SA Bank | Opp Bank |
| Russian olive | 10 | 10 | 10 | 70 | | 85 |
| Saltcedar | | | | | | 2 |
| Other | 2 | 2 | | | 2 | 5 |
| **Artificial Stabilization Features (%) at Bank Edge** | SA Bank | Opp Bank | SA Bank | Opp Bank | SA Bank | Opp Bank |
| Jetty Jacks | 88 | 0 | 70 | 10 | 0 | |
| Constructed Levees | | | | | | |
| Rip Rap/Concrete | | | | | | |
| Other | | | | | | |
| **Total % Cover per Bank** | 100 | 12 | 80 | 80 | 2 | 92 |
| **Average % Bank Cover per Segment** | 56 | | 80 | | 47 | |
| **Average % Bank Cover all Segments** | 61 | | | | | |

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