

A photograph of a lush riparian forest. The scene is dominated by tall, dense trees with vibrant green foliage. In the foreground, there is a layer of brown, dry grass and some lower-lying shrubs. The sky is a clear, bright blue. Overlaid on the center of the image is the text "Adaptive Riparian Restoration" in a bold, yellow, sans-serif font with a black outline.

Adaptive Riparian Restoration

Restoration Potential

- **Surface and ground water hydrology**
- **Abiotic Components**

Revegetation Potential

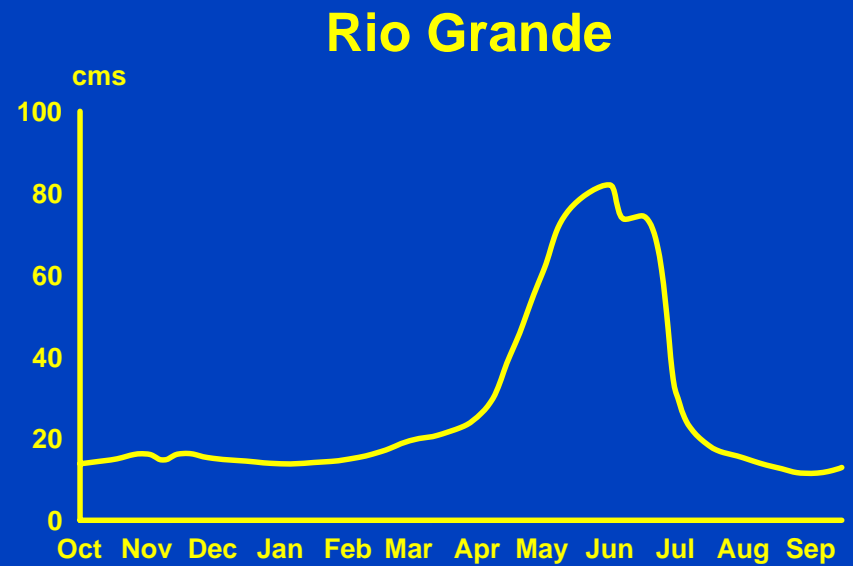


Flooding



Natural or Controlled Flooding

Specific Hydrographs



Revegetation Potential



Flooding



**Natural
Regeneration**

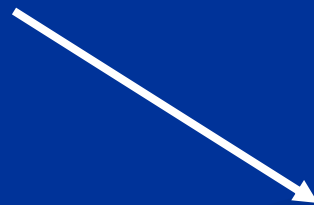
Natural Regeneration



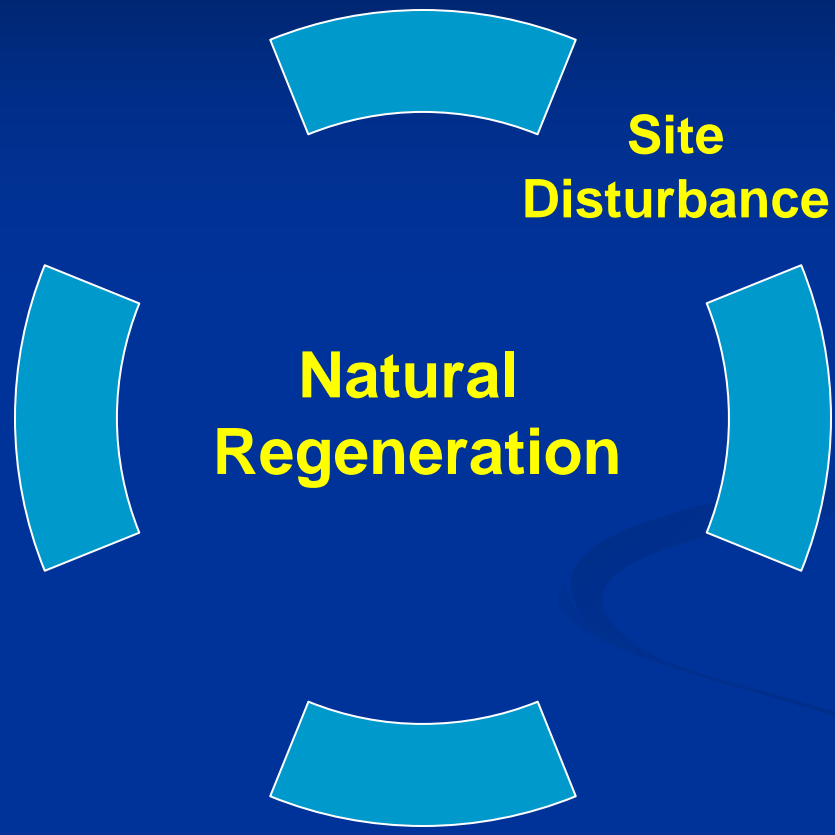
Forest



Brush



Meadow

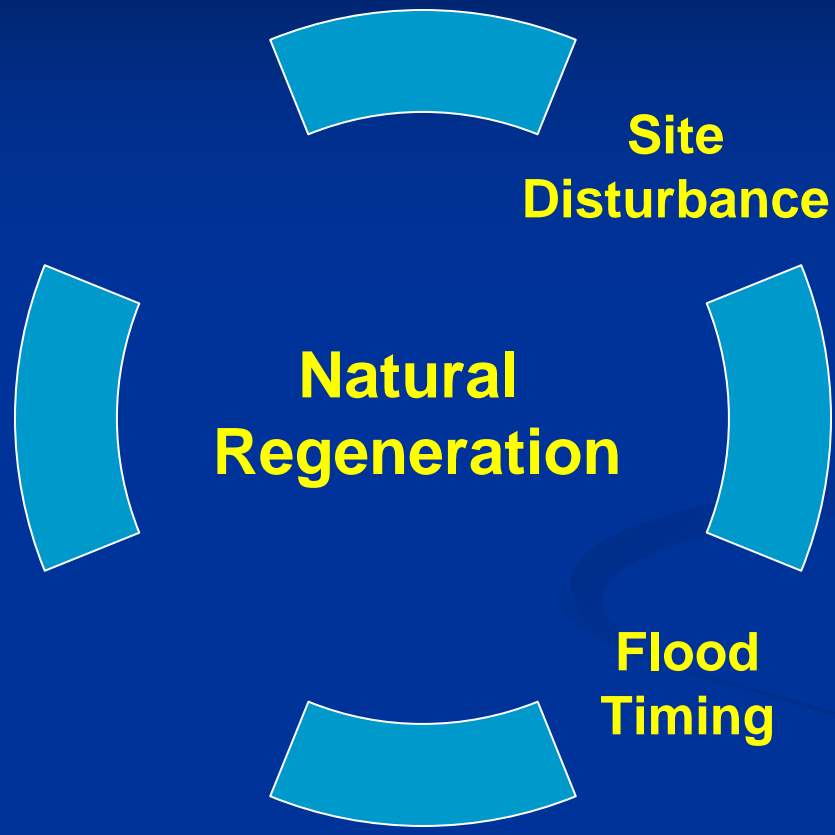


Mechanical Control

- **Root Plow & Rake**



**Cost ~ \$700/acre
>98% Control**

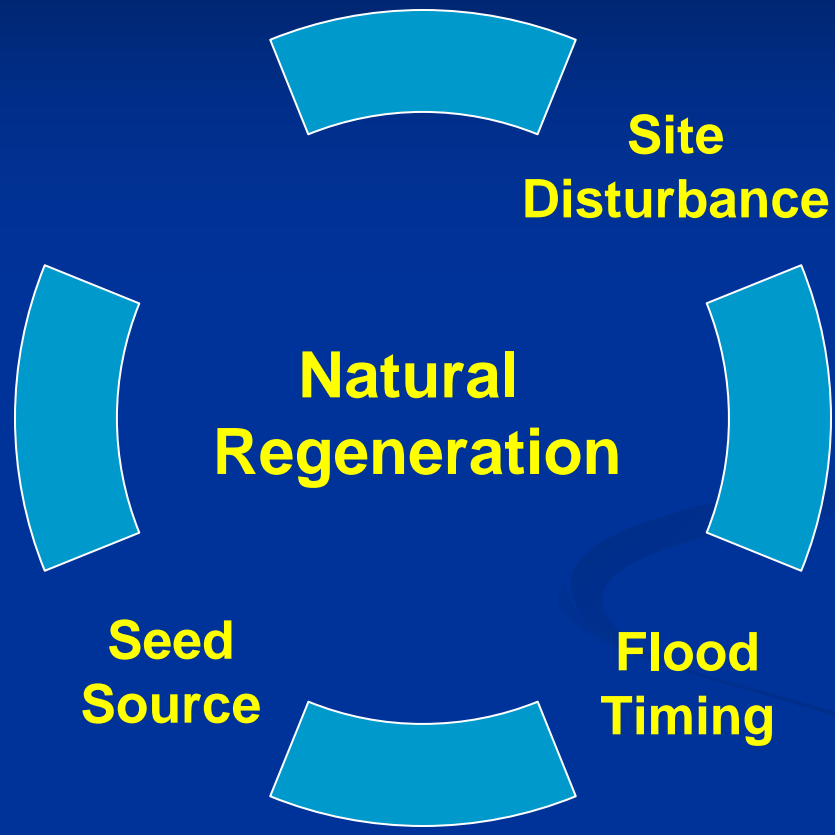


**Site
Disturbance**

**Natural
Regeneration**

**Flood
Timing**





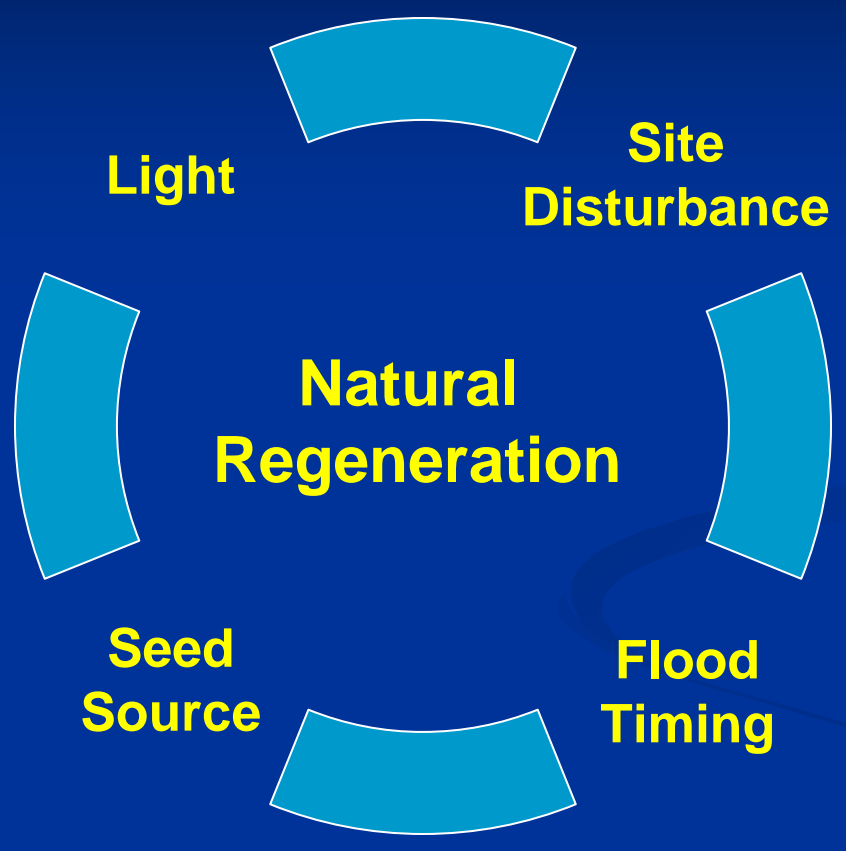
**Site
Disturbance**

**Natural
Regeneration**

**Flood
Timing**

**Seed
Source**







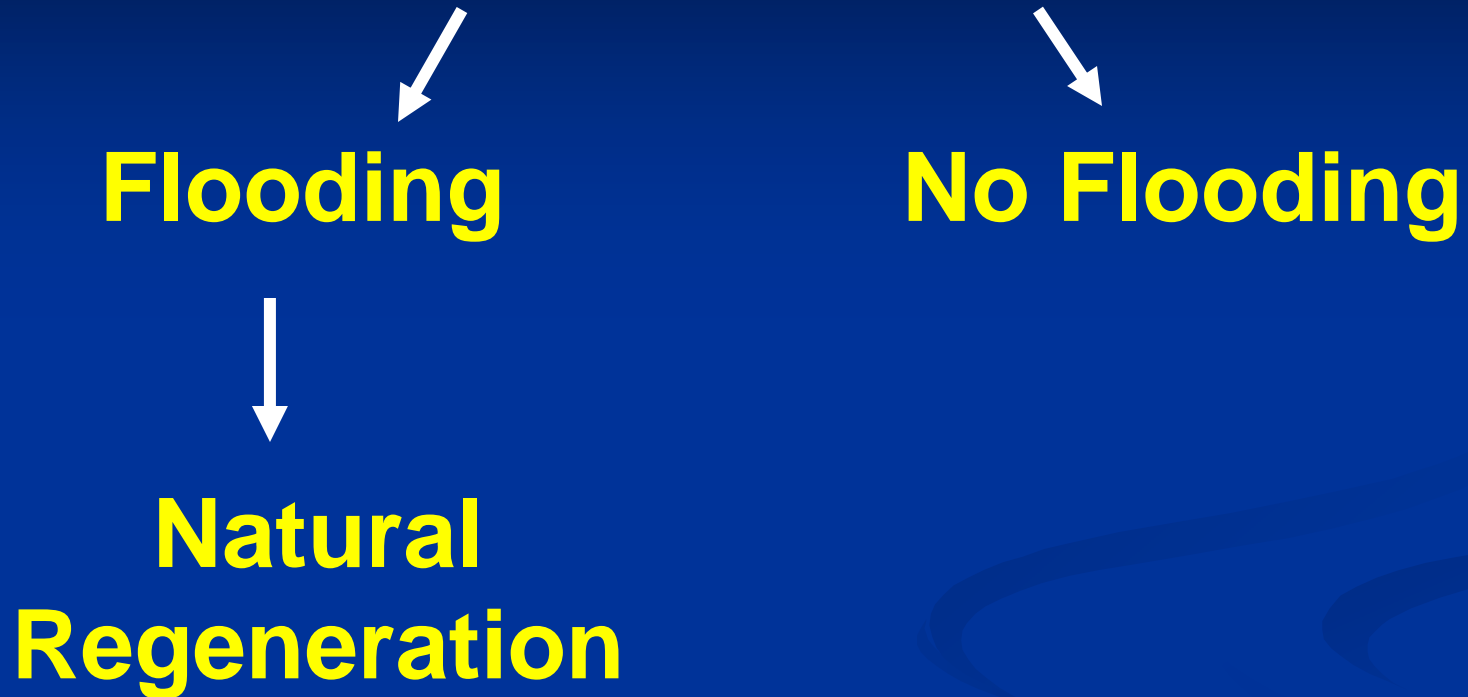


Revegetation Potential

Flooding

No Flooding

**Natural
Regeneration**





Avoid Soil Disturbance

- **Prevent Weed Competition**
- **Conserve Soil Moisture**
- **Improve Soil Nutrients**

Herbicide/Burn \$190/acre



Herbicide/Shread \$400/acre



Revegetation Potential

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graph TD; A[Revegetation Potential] --> B[Flooding]; A --> C[No Flooding]; B --> D[Natural Regeneration]; C --> E[Artificial Planting];
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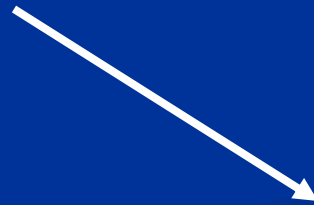
Flooding

No Flooding

**Natural
Regeneration**

**Artificial
Planting**

Artificial Planting



Factors Determining Artificial Planting Potential

- Soil Texture

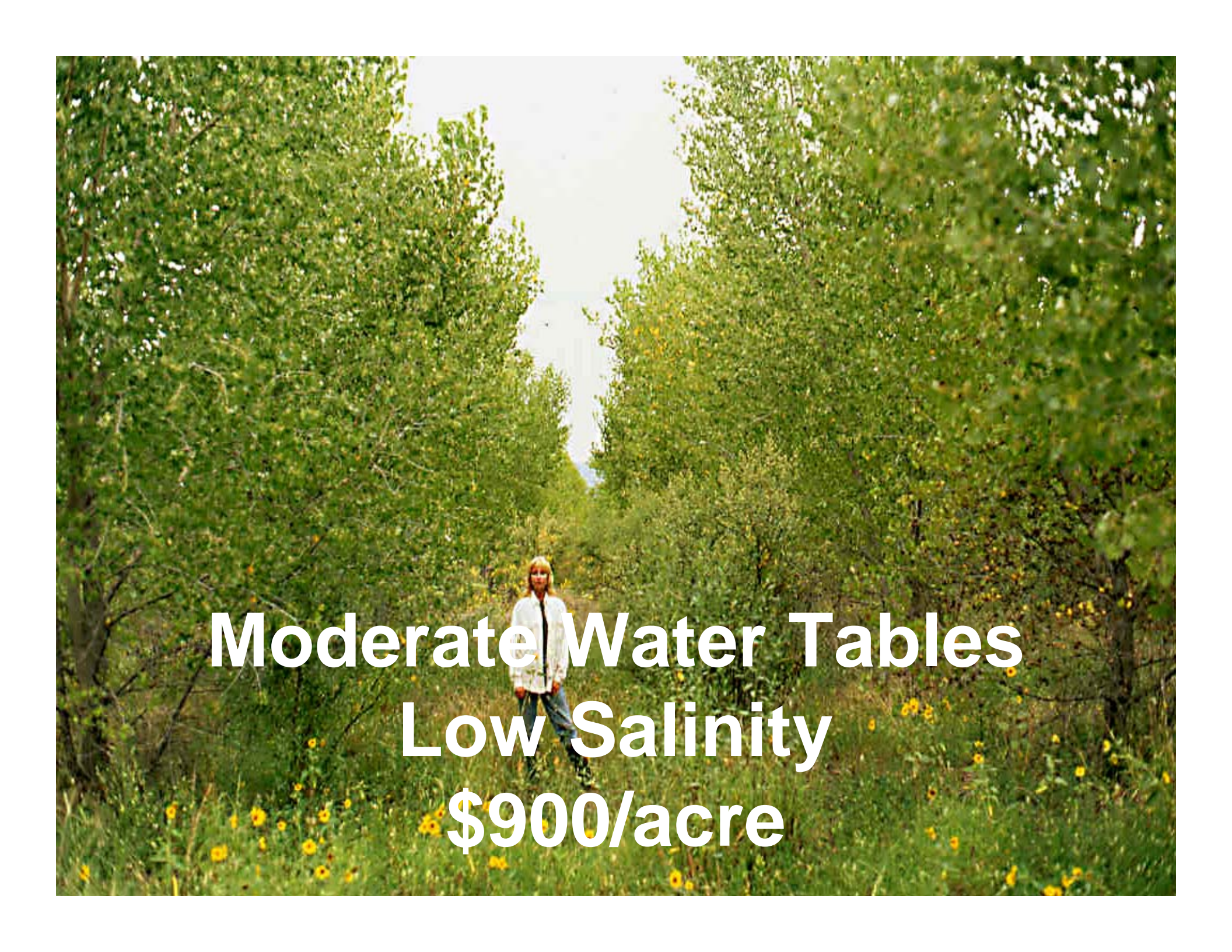
- Salinity

- Depth to Groundwater



Pole Planting




A woman with blonde hair, wearing a white jacket and blue jeans, stands in the center of a field. The field is filled with tall green trees and numerous yellow flowers. The background shows a clear sky and distant hills.

Moderate Water Tables
Low Salinity
\$900/acre




Beans Seeds Fruits



A man wearing a cap, sunglasses, a dark polo shirt, and light-colored pants is crouching in a dry, sandy field. He is looking towards the camera. The ground is sandy with sparse, low-lying vegetation. In the background, there are some logs or pipes lying on the ground. The overall scene suggests a dry, arid environment.

**Shallow Water Tables
Moderate Salinity
\$2,700/acre**



A photograph of a dry, arid landscape. The foreground and middle ground are filled with sparse, brownish, scrubby vegetation. In the background, there are several trees with brownish leaves, and a clear blue sky is visible above. The overall scene suggests a semi-arid or desert environment.

**Deep Water Tables
High Salinity
\$120/acre**

Revegetation Potential

↓
Flooding

↓
No Flooding

↓
**Natural
Regeneration**

↙

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graph TD; A[Revegetation Potential] --> B[Flooding]; A --> C[No Flooding]; B --> D[Natural Regeneration]; C --> D;
```

The diagram is a flowchart on a dark blue background. At the top center is the text 'Revegetation Potential' in yellow. Two white arrows point downwards from this text to 'Flooding' on the left and 'No Flooding' on the right, both in yellow. From 'Flooding', a white arrow points down to 'Natural Regeneration' in yellow. From 'No Flooding', a white arrow points diagonally down and to the left to 'Natural Regeneration'. The bottom right of the image features a faint, stylized graphic of water ripples.

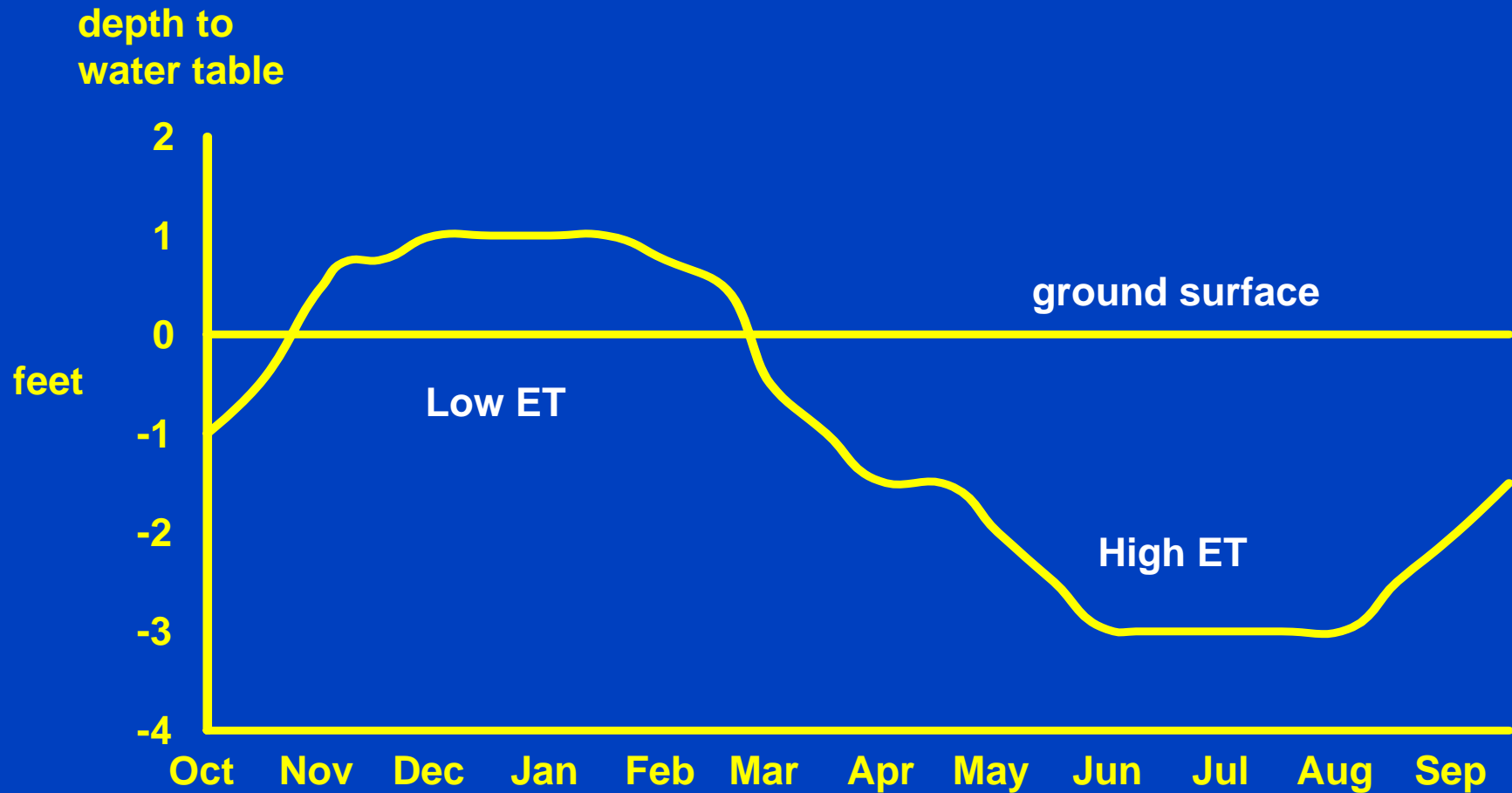


Saltgrass Meadow

Alkali Sacaton Grassland



Groundwater Restoration



Revegetation Potential

Flooding

No Flooding

**Natural
Regeneration**

**Artificial
Planting**

Saltcedar Control Strategies