

Oakland County Riparian Corridor Mapping



Mapping Our Most Sensitive Natural Resource Corridors

Riparian Corridors Mapping

- What is a Riparian Corridor?
- Why should we map Riparian Corridors?
- How do we map Riparian Corridors?
- How can we use Riparian Corridor Maps in Community Planning?

What is a Riparian Corridor?

A transition area between aquatic and upland ecosystems



ri par i an

NOUN: relating to or living or located on the bank of a natural watercourse (as a river)



cor ri dor

NOUN: a passageway or route

What is a Riparian Corridor?



Shiawassee

Rural, pristine,
low development



Clinton

Suburban, impacted,
moderate development



Rouge

Urban, impacted,
substantial development

How does a Riparian Corridor function in our ecological and cultural landscape?

■ Ecological Function

- Storage and transport of water sediment, and biological material
- Wildlife habitat
- Key wildlife transportation corridor

■ Cultural Function

- Recreation
 - Angling, hiking, canoeing, nature enjoyment
- Historic resources:
 - Native Americans routes
 - Settlement sites for early Europeans



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Why Should We Map Riparian Corridors?

- To identify and clarify where riparian corridors exist
- To inventory the extent and quality of our riparian resources
- To assist in planning for riparian corridor conservation and restoration



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How Do We Map Riparian Corridors?

1. Define Riparian Corridors
2. Define the landscape components that comprise Riparian Corridors.
3. Delineate landscape components using the best available topographic maps and aerial photos.

How Do We Map Riparian Corridors?

1. Define Riparian Corridors

“Riparian areas are areas of the landscape that connect to and influence or are influenced by the surface and subsurface hydrologic features of perennial or intermittent waterbodies (rivers, streams, lakes, ponds, drainages, and wetlands).

Features of riparian areas include bottomlands containing the geomorphic floodplain, oxbows and abandoned channels, and uplands, containing valley walls, bluffs, terraces, and ravines.

Due to human development, encroachment, and management, riparian areas may contain altered features such as altered riparian areas, enclosed channels, and channelized (straightened) channels.”

How Do We Map Riparian Corridors?

2. Define the landscape components that comprise Riparian Corridors

Uplands (Area above modern floodplain elevation):

Valley Wall: Sloped lands which enclose the river valley

Ravine: Steep sided- tributary channels which reflect rapid down-cutting such as during episodic lake-level lowering.

Terrace: Abandoned floodplains reflecting a former (higher) river base elevation during a historical lake stage.

Bluff: Valley walls with a steep slope ($>10\%$) and a significant elevation change (20 feet or greater) with the floodplain or terrace below.

How Do We Map Riparian Corridors?

2. Define the landscape components that comprise Riparian Corridors

Lowlands (Areas at or below modern floodplain elevation):

Oxbow: Old channel that was abandoned as the river migrated that is still hydrologically connected with the modern river and may be inundated during wet seasons or flood events.

Abandoned Channel: Old channel within the floodplain that has been abandoned as the river has migrated and is hydrologically connected to the modern river only minimally or not at all.

Confluence Area: Area where two streams coalesce to flow as one; may include depositional deltas or delta-terraces.

Deltas: Depositional areas formed as ancient streams or rivers slowed in velocity as they formed confluences with other tributaries or flowed into glacial lakes or estuaries.

Lakes Area: Riparian area dominated by lakes and narrow inlet/outlet streams.

Marshy Area: Riparian area dominated by slow-flowing wetlands and marshes and narrow inlet/outlet streams.

Valley Floor: The modern river floodplain.

Modern Channel: The modern channel.

How Do We Map Riparian Corridors?

2. Define the landscape components that comprise Riparian Corridors

Altered Features (Any feature within the riparian corridor that has been significantly altered by human encroachment, development, or management):

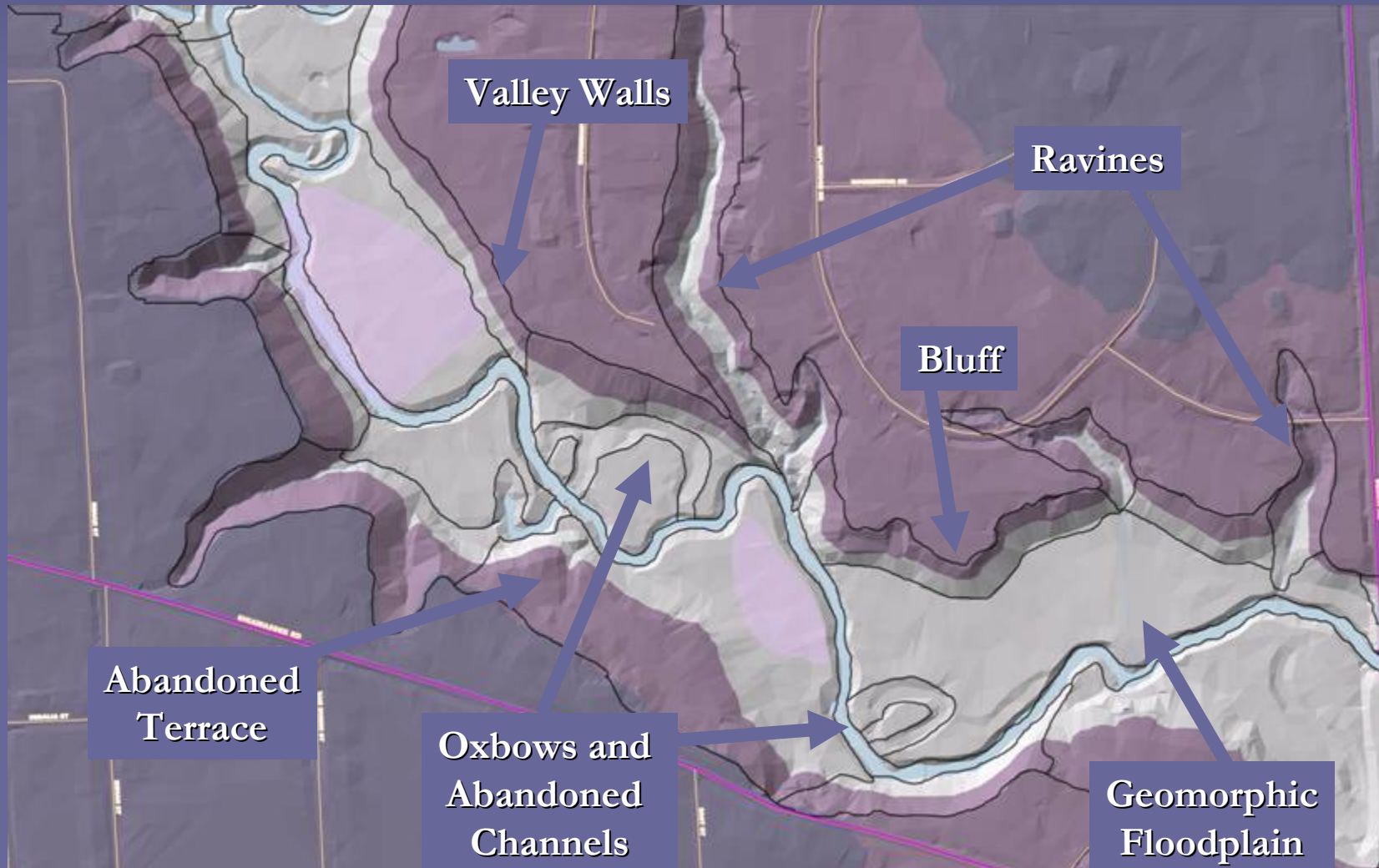
Altered Riparian Area: Riparian area I which the topography has been so extensively altered that it is impossible to tell what underlying riparian physical features may exist.

Enclosed Channel: River channel that has been encased in metal or concrete and diverted through an underground path.

Channelized Channel: River channel that has been straightened to accommodate development or facilitate drainage.

How Do We Map Riparian Corridors?

3. Delineate landscape components using the best available digital topography and aerial photos



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How can we use Riparian Corridor Maps in Community Planning?

- Riparian Corridor Greenway Planning
- Watershed Planning
- Critical Area Protection
- Stormwater Management
- Ecological Restoration

