

# Mapping the Coastlines

## *A Cadastral Perspective*

Presented by:

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# Cadastral Issues

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Climate Change and Coastal Areas

Impact on Parcel Ownership

Economic and Legal Impact

# What does Cadastral or “Cadastre” mean?

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- A public register showing the details of ownership and value of land; made for the purpose of taxation.
- A record of interests in land, including both the nature and extent of interests. Usually this means maps and other descriptions of land parcels as well as the identification of who owns certain legal rights to the land.

# Cadastral GIS

- A GIS base layer that shows the boundaries and ownership of land parcels. Most cadastral GIS show additional details.
  - Political and Administrative Boundaries
  - Road/Railroad ROW's with Designations
  - Parcel Numbers (PIN)
  - Subdivision Boundaries and Names
  - Lot Numbers and Dimensions
  - Survey Tract/Lot and Dimensions
  - Hydrography

# Mapping the Coastlines: Cadastral Challenges

- Sea Level Changes
- Shifting Parcel Boundaries
- Ownership Conflicts
- Riparian Rights
- Monument Placement and Recovery
- Researching Ownership
- Legal and Economic Issues

# Changes in Sea Levels

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- **Climate Change and Coastal Areas**
  - Rise in Sea Levels
- **Impact on Parcel Boundaries**
  - Land/Water Boundaries are not Static
  - Gradual and Imperceptible – “Accretion and Erosion”
  - Rapid and Perceptible – “Avulsion”
- **Economic Impact**
  - Valuable Real Estate
  - Construction of Seawalls, etc.
  - Reduction in Property Tax Revenue

# Riparian (Littoral) Rights

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**Accretion** - is the gradual and imperceptible addition to coastal land by the natural deposition of water borne sediments. It cannot be observed as it occurs.

**Erosion** - is the gradual and imperceptible submergence of coastal land by rising sea levels. It cannot be observed as it occurs.

**Property boundaries will follow the changing physical location – move inland**

# Riparian (Littoral) Rights

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Avulsion - Rapid and perceptible change to coastal land, including violent removal or addition of land.

Property boundaries will remain fixed at the pre-event physical location.

# Shifting Boundaries

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## Ordinary High Water Mark "OHWM"

*A legal term with a similar meaning as a Mean High Water Mark. The intersection of the calculated elevation of mean high water (MHWM) and the topography of the land, whether beach, rock, or bluff.*

The Ordinary High Water line is constantly in flux



JEREMY CAY, PLAT OF LOTS 1A & 1B

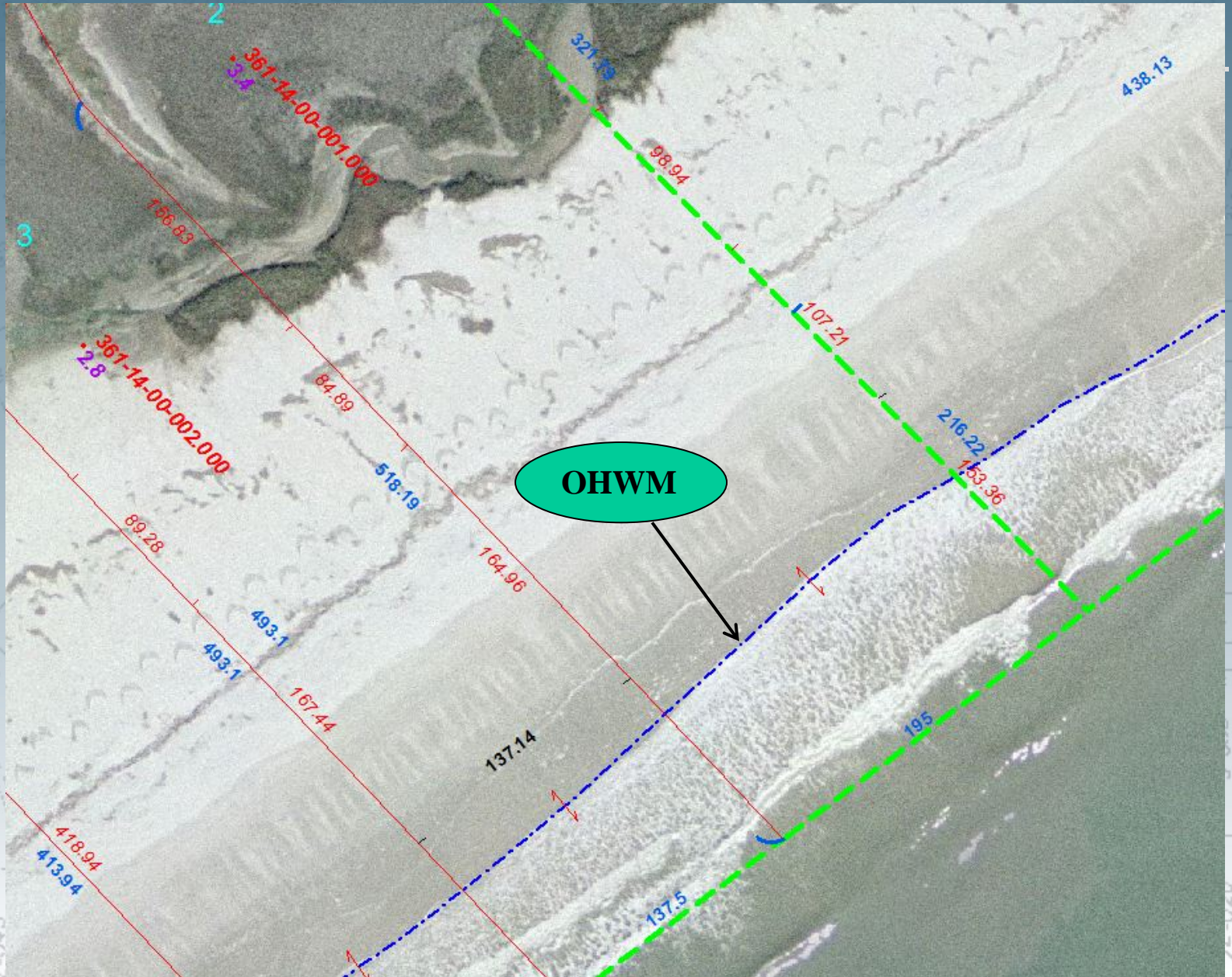


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# Parcel Conflicts



# Ownership Conflicts



# Parcel Conflicts



# Parcel Conflicts



# Monument Placement & Recovery

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- Were Monuments established?
- What type?
- Were they documented and recoverable?
- May be underwater
- Impact on legal proceedings

# Researching Ownership

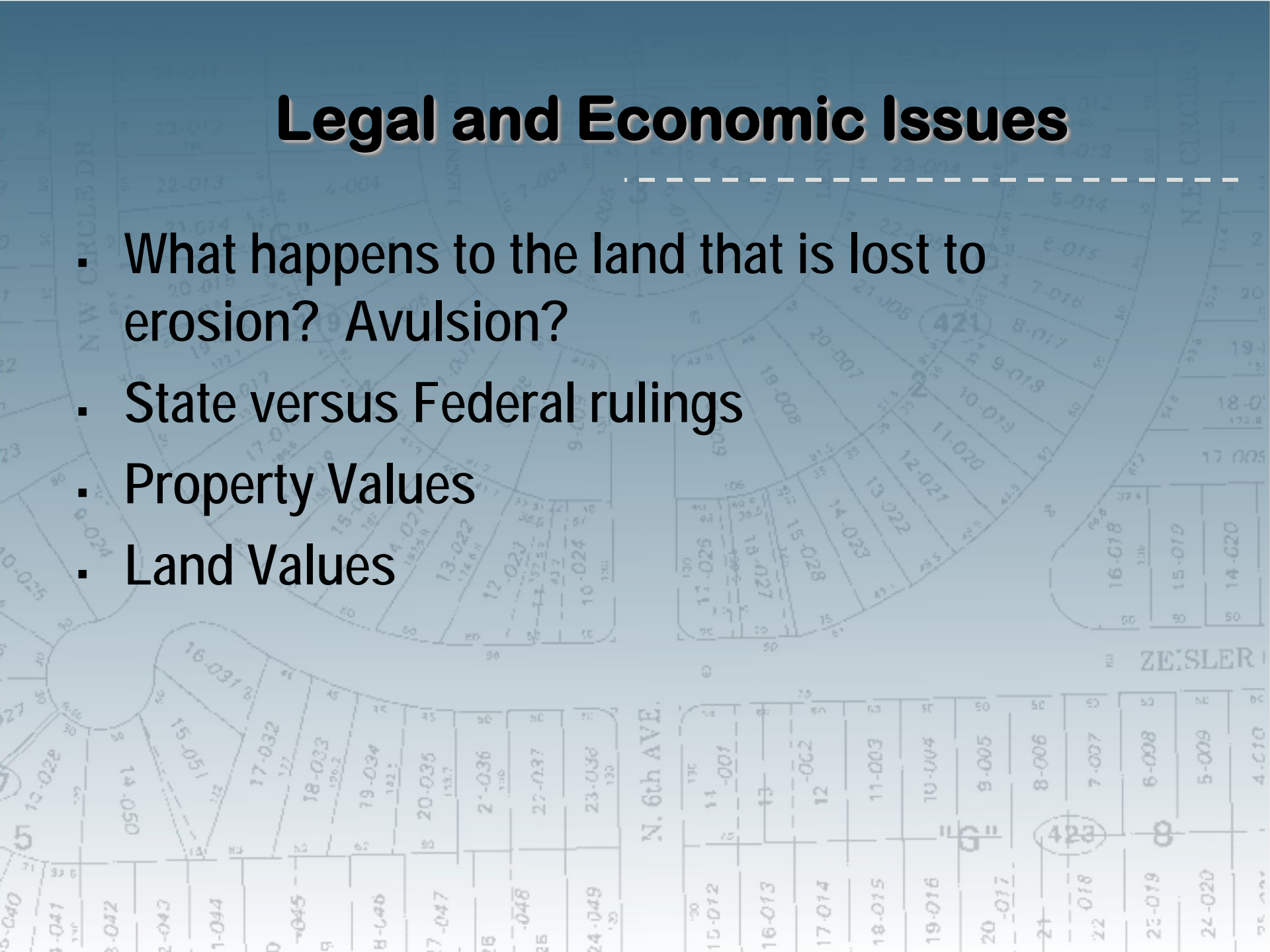
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- Questions, errors, discrepancies, and boundary conflicts require investigation
- Review necessary deeds, surveys, plats
- Verify tax roll data
- Seek out other corroborative data
- Consult staff
- Expect to have research !

# Legal and Economic Issues

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- What happens to the land that is lost to erosion? Avulsion?
- State versus Federal rulings
- Property Values
- Land Values





Thank You!

Questions?

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