



# Water and the Site Selection Process

2<sup>nd</sup> Annual Dayton Water Conference  
University of Dayton  
Dayton, OH

May 16, 2011  
Mark M. Sweeney

# Introduction to McCallum Sweeney Consulting

# MSC Clients



Daiichi-Sankyo



BMW Group

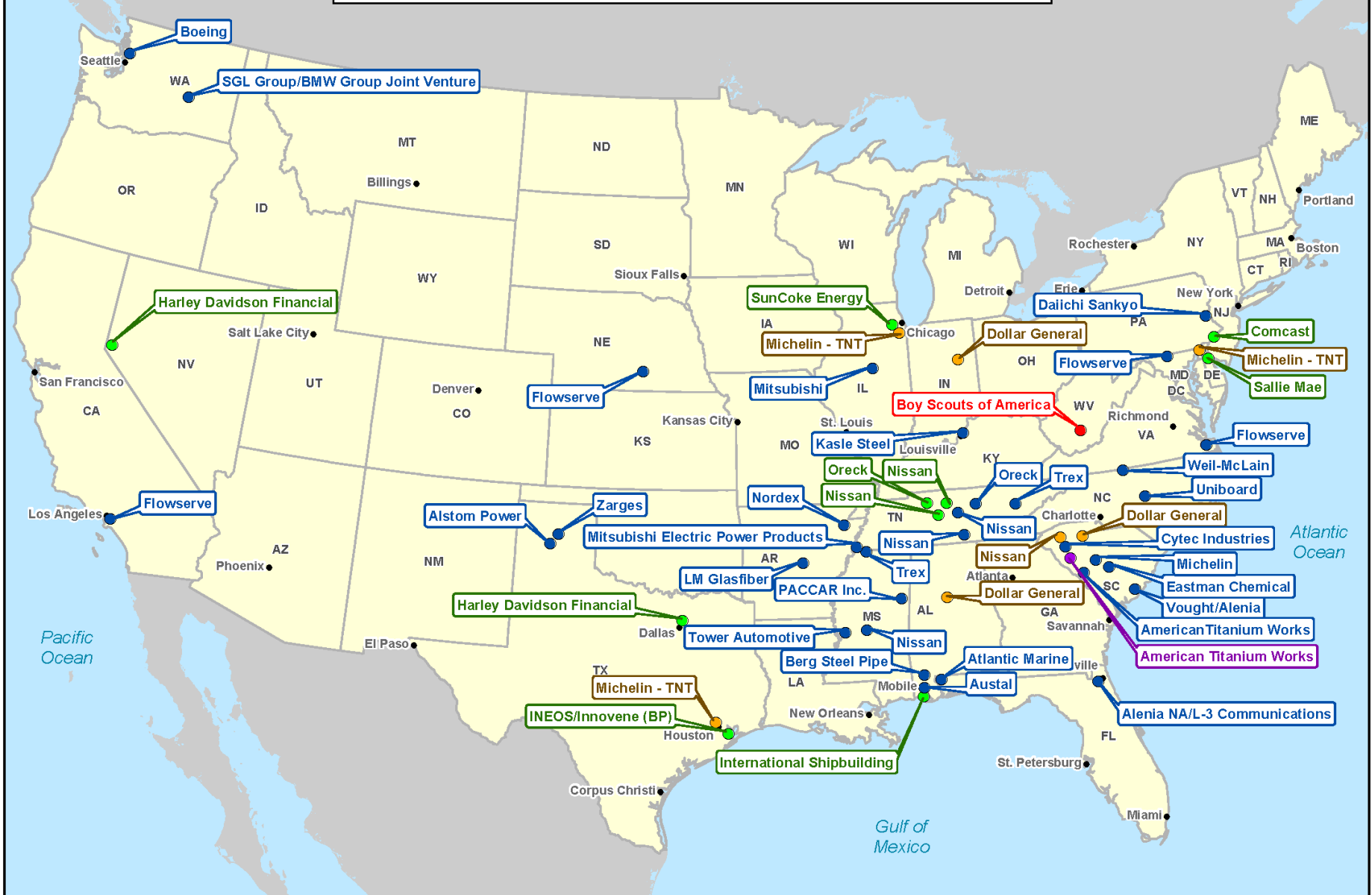
SGL Automotive Carbon Fibers LLC joint venture



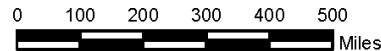
American Titanium Works



# McCallum Sweeney Consulting Project Announcements



- Project Type**
- Office
  - Distribution
  - Manufacturing
  - Research & Development
  - Other



Source: MSC Proprietary  
 Projection: Albers Equal Area Conic  
 Geographic Data Source: ESRI, 2009  
 Map Composition: MSC, 2010



# The Site Selection Process

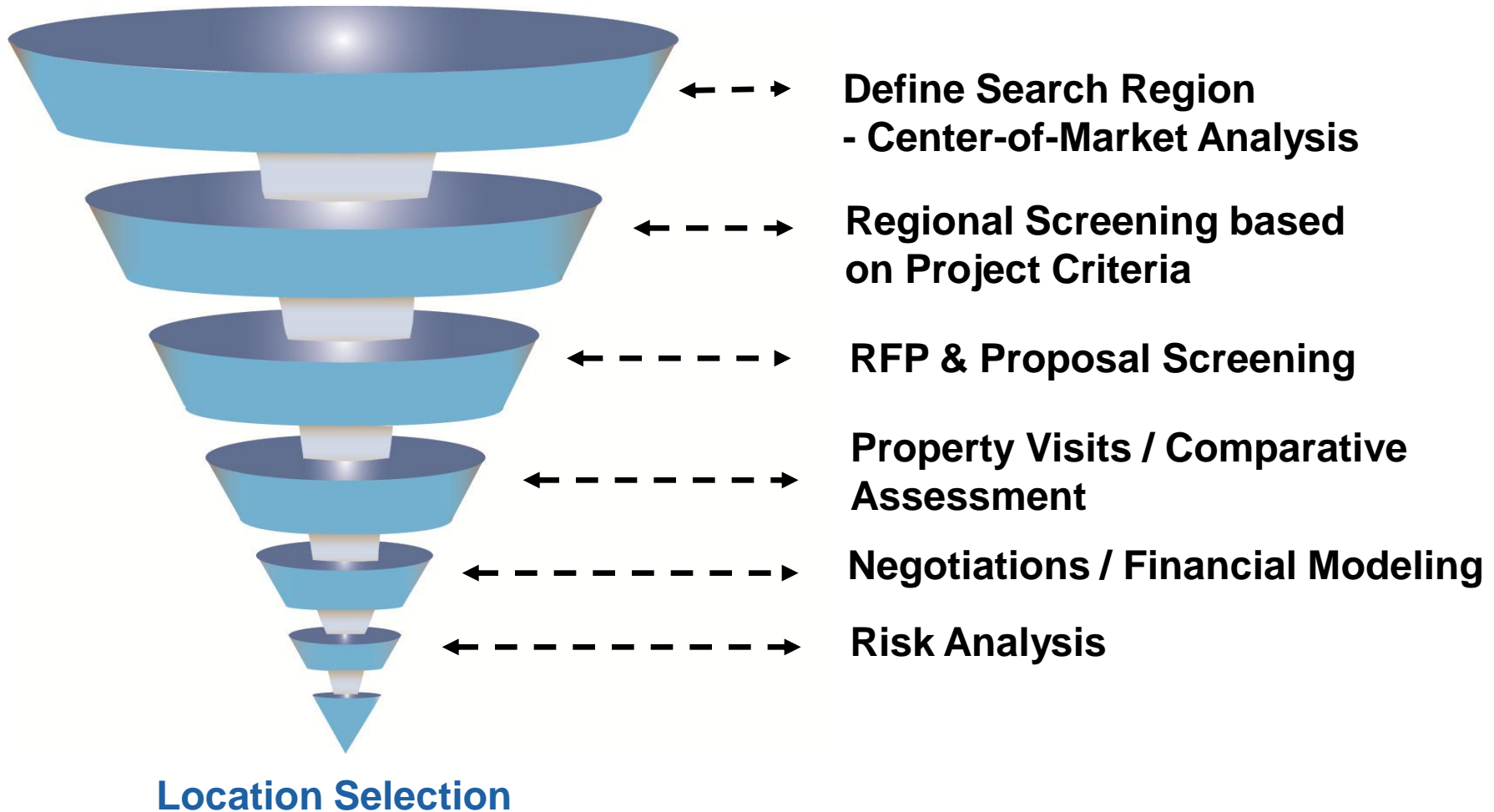
# Fundamental Characteristics

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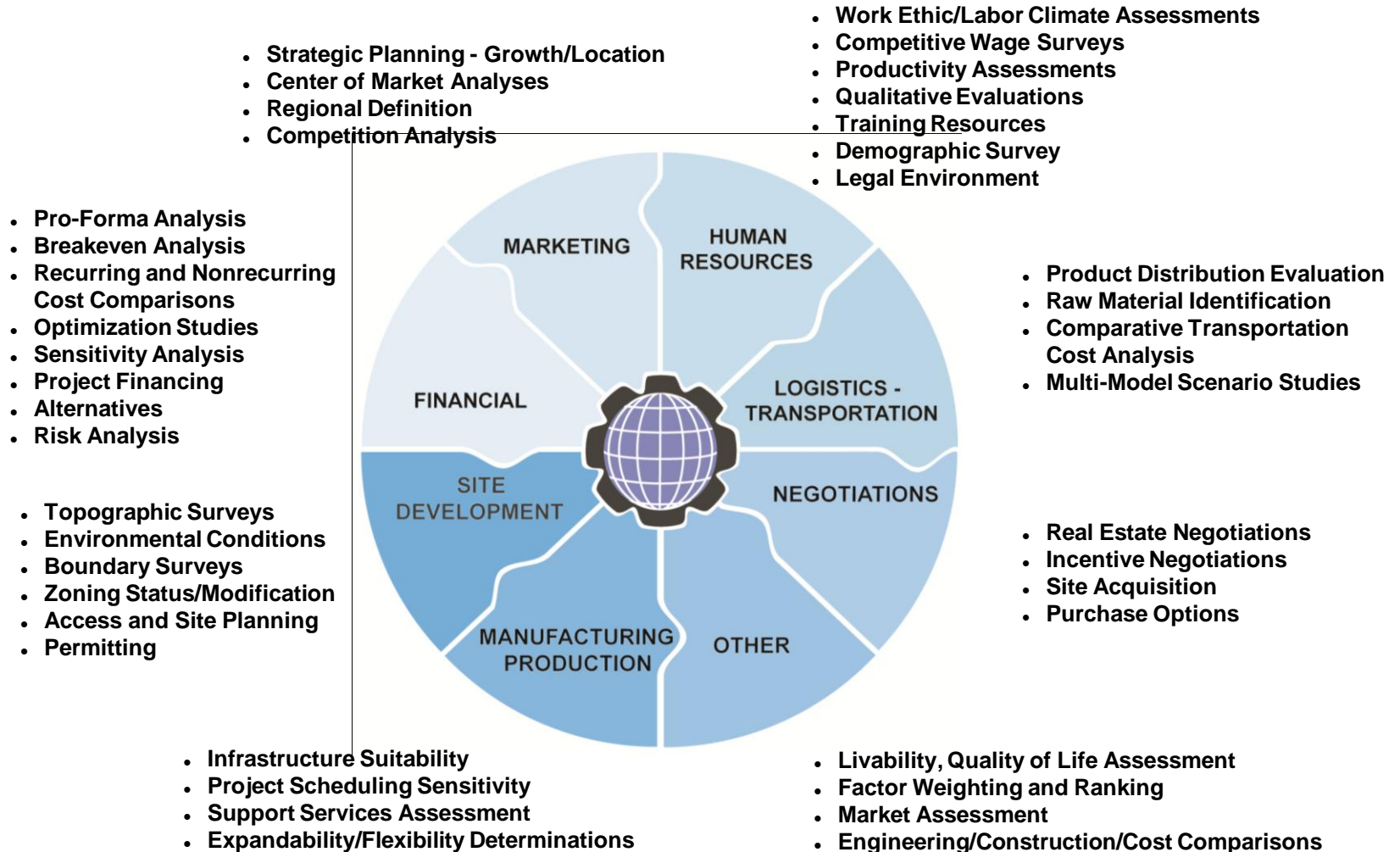
- Profit Driven
  - Investment for purpose of return
- Deadline Driven
  - Both the site selection and the project
- Competitive
  - Multiple location options
- Comprehensive
  - Complex decision involving most functional areas
- Risk Averse

# Competitive Site Selection Screening Process

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# Comprehensive Analysis



# *MSC Site Selection Process*

# Site Selection Process

Planning Phase	Phase I	Phase 2	Phase 3	Phase 4
<ul style="list-style-type: none"><li>• Conception</li><li>• Feasibility</li><li>• Investment Decision</li></ul>	<ul style="list-style-type: none"><li>• Alignment/ Criteria</li><li>• Regional Analysis</li><li>• Areas of Interest</li><li>• Request for Proposal</li><li>• Candidate Communities</li></ul>	<ul style="list-style-type: none"><li>• Community Visits</li><li>• Property Evaluation</li><li>• Comparative Analysis</li><li>• Finalist Communities</li></ul>	<ul style="list-style-type: none"><li>• Negotiations</li><li>• Evaluation</li><li>• Site Due Diligence</li></ul>	<ul style="list-style-type: none"><li>• Prepare MOU</li><li>• Public Announcement</li><li>• Incentive Capture Support</li></ul>

# Site Selection Process – Phase I

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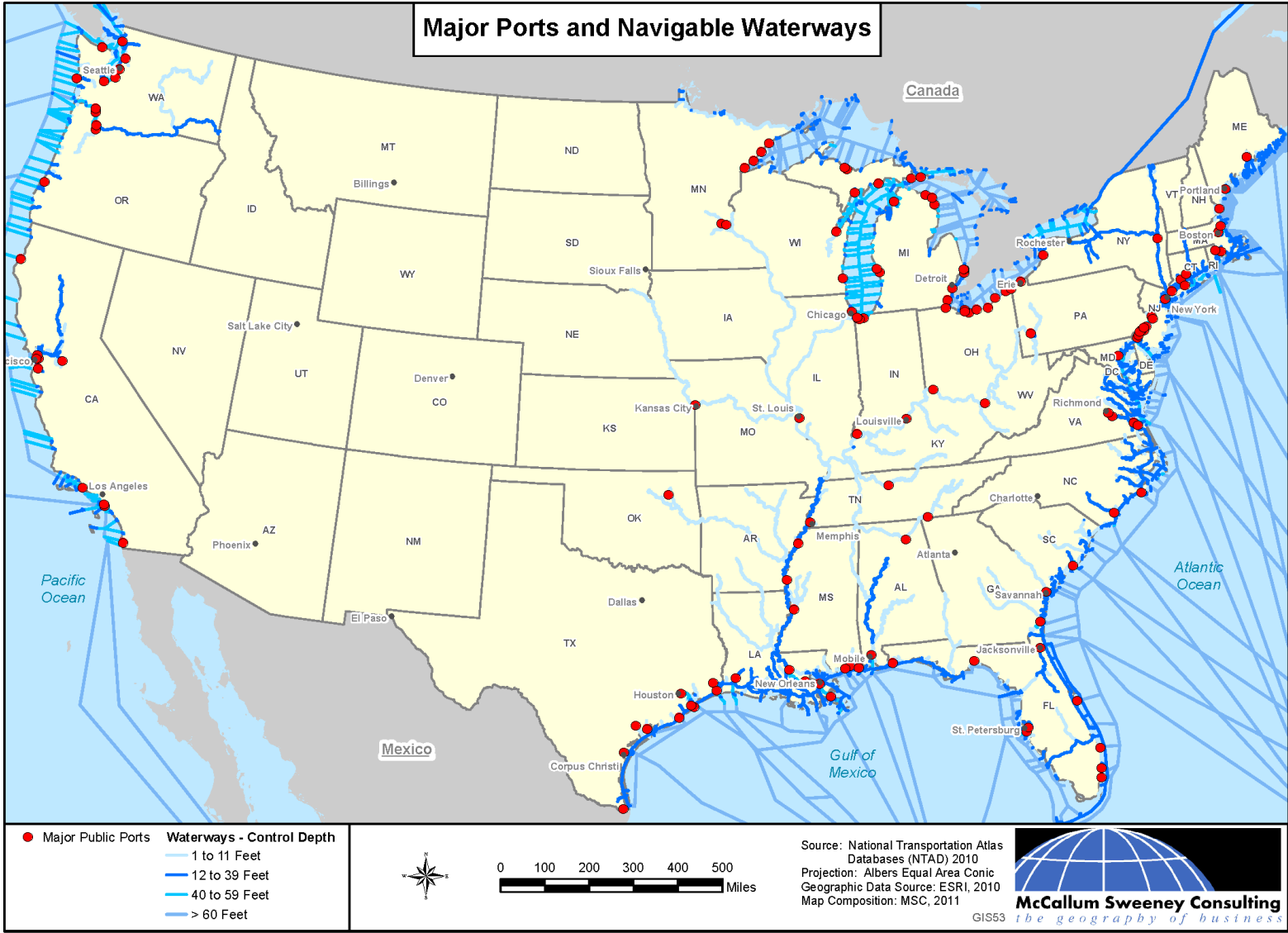
- Alignment Meeting
  - Project parameters, decision criteria, search region
    - Water transportation
    - Water for process / operations
    - Corresponding wastewater criteria
- Water in the Alignment / Project Criteria Development Process
  - Water in the operating process
    - Energy (steam)
    - Product component
    - Mechanical
    - Cooling
    - Cleaning

# Site Selection Process – Phase I

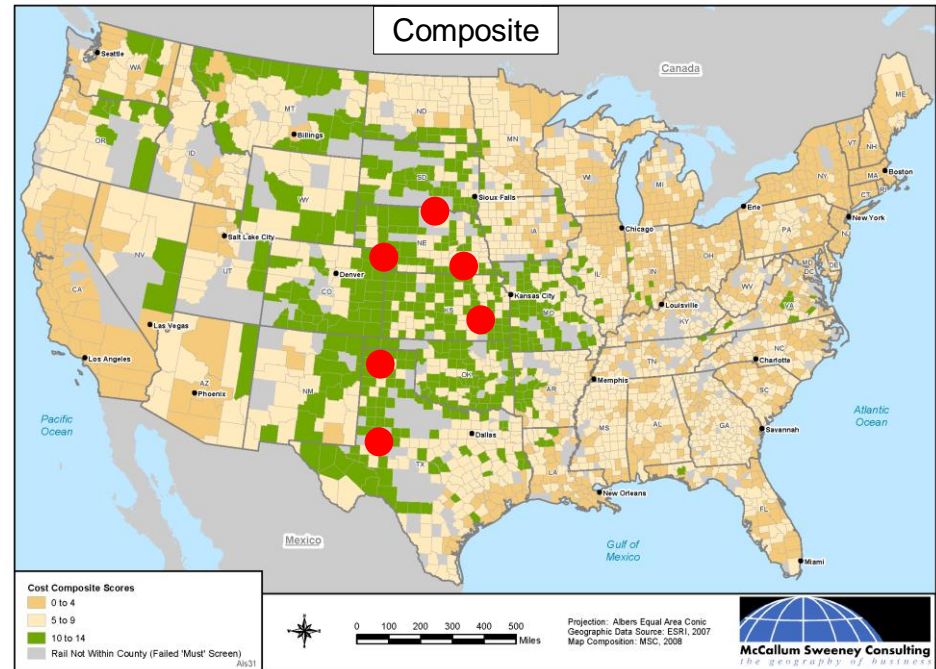
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- Regional analysis using GIS (MSC)
  - Attraction and aversion factors
    - Attraction
      - Labor force
      - Proximity to interstates
      - Etc.
    - Aversion
      - Natural disaster risks
      - Competitor locations
      - Etc.
- Water in the Phase I GIS Screening Process
  - Transportation
    - Access to ports
    - Access to navigable waterways

# Site Selection Process – Phase I



# Identification of Areas of Interest



# Site Selection Process – Phase I

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- Determine Areas of Interest
- Web Research
  - AND / OR –  
Issue request for proposal
    - Defines project and information needs
- Desktop evaluation of information / proposals
  - Screen against project criteria
- Milestone Meeting I
  - Determine Candidate Communities

# Site Selection Process – Phase I

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- Water in the Phase I Initial Proposal Process
  - Infrastructure
  - Water availability
    - Plant capacities
      - Current plant capacity
      - Current available capacity
    - Infrastructure
      - From plant capacity to line size
  - Wastewater
    - Plant capacities
      - Current plant capacity
      - Current available capacity
      - Design capacity
      - Discharge capacity

# Site Selection Process – Phase II

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- Property / community visits
  - Physical factors
  - Operating factors
  - Living factors
- Detailed and thorough field investigations
- Permitting
  - Development of new water features
  - Storm water management
  - Wastewater pretreatment

# Site Selection Process – Phase II (Physical Conditions)

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- Location
- Configuration
- Topography
- Access
- Zoning
- Neighboring land use
- Environmental (Phase I)
- Ownership
- Construction feasibility
- Transportation Infrastructure
- **Utilities infrastructure**
- Acquisition cost
- Site development cost

# Site Selection Process – Phase II (Operating Conditions)

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- Labor market
  - Availability
  - Quality / work ethic
  - Wages / benefits
- Training resources
- Education resources
  - Higher education
  - Vocational education
- **Utility services**
  - **Reliability**
  - **Quality**
  - **Costs**
- Taxes
  - Income, sales, property
- Leadership
- Community acceptance
- Incentives

# Site Selection Process – Phase II (Operating Conditions)

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- Water in the Phase II Evaluation Process
  - Reliability
    - Water sources
    - Supply variations (seasonal)
    - Long-term supply concerns
  - Quality
    - Water analysis
    - Volumes, flows, pressure
    - Fire water issues
    - Grey water possibilities
  - Cost
    - Volume users
    - Volume rates
      - Seek near marginal cost rates

# Site Selection Process – Phase II (Living Conditions)

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- Attractiveness
- Physical conditions
- Movement / congestion
- Housing
  - Availability, costs
- Recreation
- Social / Cultural
- Education
  - Facilities
  - Achievement
- Medical / health care
  - Facilities / capabilities
  - Costs
- Shopping
- Hotel / meeting space

# Site Selection Process – Phase II

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- Milestone Meeting II
  - Review comprehensive location analyses
  - Down-select to Finalist Locations

# Site Selection Process – Phase III

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- Incentives / Real Estate Negotiations
  - Property
  - Site preparation
  - Infrastructure
  - Utilities
  - Transportation
  - Training
  - Taxes
  - Permitting
  - Low cost financing
- Public announcement
  - Align company and community objectives
  - Press releases, events, etc.
- Incentive capture support
  - On an as-needed basis

# Big Picture Water Issues in Site Selection

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- Technology improvements to reduce demand
- “Green” treatment methods and policies
- Inter-basin transfers
- Riparian rights
- State and national “water wars”

# McCallum Sweeney Consulting

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