JCP from the Applicants Perspective
Offshore Dredge vs. Upland Truck Haul

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JCP from the Applicants Perspective – Nourishment Challenges

- Sand source
- Inlet bypassing is lacking
- Diminishing offshore borrow areas
- Exposure of nearshore hardbottom & expansion of seagrass due to cumulative sand losses
- Erosional hotspots
- Storm events
- Beach development & hardened shorelines
- Historical Inlet dredging with offshore disposal
JCP from the Applicants Perspective –

- **Dredging Project = Offshore Sand Source**

Involves:
- Sand from offshore borrow area
- Dredging sand from ocean floor
- Transporting sand to the shoreline via pipeline
- Pumping of sand onto beach/screening sand
- Use heavy equipment to move and grade sand
Truck Haul Project = Upland Sand Source

Involves:

• Sand from upland sand mine
• Loading washed sand at the upland mine
• Highway transport to Project site
• Delivery to beach through access corridor
• Stockpiling on-site
• Reload to off-road vehicles and transfer to placement area
• Beach grading
Considerations

• Sand
• Permitting Effort/Duration
• Costs
• Environment
• Monitoring Efforts
• Public Perception
• Other Considerations
Offshore Dredging

- Sand sources are diminishing/increase search for sand
- Borrow area sand varies in grain size/color
- Higher silt content
- Borrow areas must be tested for compatibility with native sand
- Screening required to remove large rocks and shell
- Turbidity caused by dredging
- Sand more compact

Truck Haul

- Sand readily available
- Prescribe grain size/color
- Sand washed to remove fines
- Sand mines accepted by Agencies for use on beaches
- Less sand compaction issues
- Reduced escarpment formation
Offshore Dredging

- Takes more effort due to additional documents, monitoring plans, coordination and consultation required
- Timeline 2+ years
- NEPA - EIS

Truck Haul

- Less effort due to less monitoring plans & consultation
- Timeline approximately 2 years (initial authorization)
- Timeline approximately 6 months (Subsequent Nourishment)
- 10-Year Maintenance Permits Flexibility
JCP from the Applicants
Perspective – Costs

Offshore Dredging
- Sand: ~$20/cy
- Permitting
- Construction: dredge mob
- Monitoring: additional monitoring required pre-, mid- and post-construction + more areas to monitor

Truck Haul
- Sand: ~$45/cy
- Permitting
- Construction
- Monitoring: less monitoring burden
Offshore Dredging

• Sea turtle nesting declines the first nesting season
• Escarpments tend to form
• Sediments tend to compact
• Turbidity concerns in the dredging and mixing zone on the beach
• Possible pipeline leaks leading to turbidity or hardbottom burial
• Potential for impacts to hardbottom around borrow area, pipeline corridor and vessel access corridors as well as nearshore hardbottom from equilibration

Truck Haul

• Sea turtle nesting remains similar
• Fewer escarpments
• Less compaction
• Less turbidity concerns
• Reduced potential for impacts to nearshore hardbottom from equilibration of beach profile
Offshore Dredging

- Monitor HB around BA, pipeline corridor and access areas
- Monitor nearshore HB
- Aerials required each year of monitoring
- Large staging area during construction

Truck Haul

- No borrow area, pipeline or access areas to monitor
- Monitor nearshore HB
- Aerials typically not required
- Relatively small staging area during construction
Offshore Dredging

• Sand color is darker/less desirable
• Offshore dredge is an eye sore
• Turbidity around dredge and impact to dive sites
• Impacts to navigation
• Equilibration

Truck Haul

• Sand color lighter/more pleasing
• Staging Area
• Noise pollution
• Traffic congestion
• Air pollution

Noise Pollution Effects:
- Permanent hearing loss
- High blood pressure
- Insomnia
- Labored breathing
- Stress
- Altered brain chemistry
- Increase in crime
- Permanent damage to the voice
Offshore Dredging

- Greater production rates (24 hr dredging)
- Economies of scale for large scale projects
- Costs associated with offshore sand search & geotech
- Variability with fuel costs and market demand

Truck Haul

- Limited to normal business hours 6 days a week for mine production/truck transport/traffic/rehandling
- Variability with fuel costs and market demand
- Increased impacts to local roadway & infrastructure
- More economical for small scale project
Questions?