



Engineer Research and
Development Center

Future Capabilities of GenCade

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**US Army Corps
of Engineers®**



FY13 Activities

CMS-Wave
 Wind input, wave generation & growth,
 wave transformation, diffraction, reflection,
 run-up, setup, overtopping, structures,
 surface roller

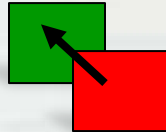


GenCade

Option for GenCade to accept forcing from an external wave model

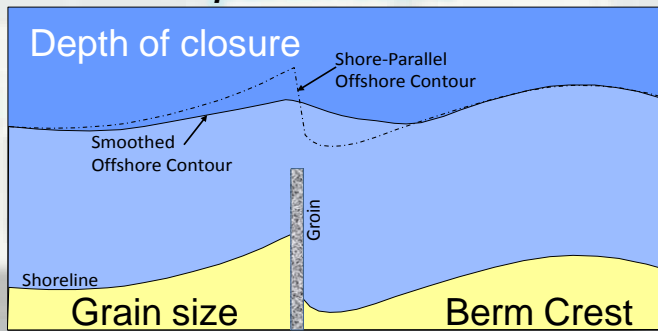
GenCade →

SBAS Arc10



GenCade output used as input to create an SBAS Calculated Sediment Budget

Variable alongshore parameters



Variable structures and failure

GenCade Arc Attributes

Arc Options
 Left Jetty on Inlet
 Attributes...
 Help... OK Cancel

Groins

| | Cell Index | Length (ft) | Permeability | Diffracting | Seaward Depth (ft) |
|---|------------|-------------|--------------|-------------------------------------|--------------------|
| 1 | 0 | 0.0 | 0.0 | <input checked="" type="checkbox"/> | 3.0 |

Begin Date: 01-Apr-1984
 End Date: 31-May-1984
 Length = 550.04



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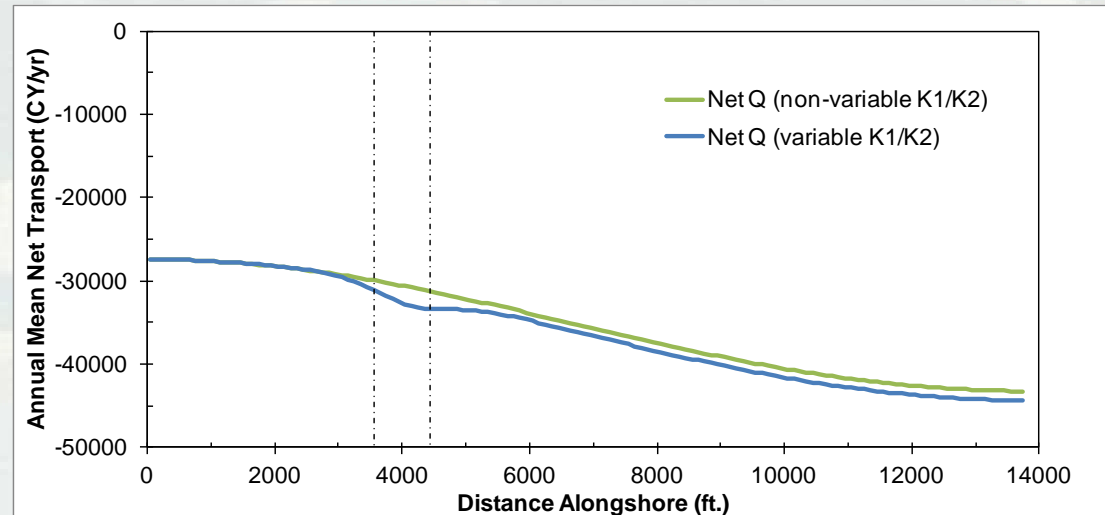
FY13 Documentation

Wiki-TN: Standard Methodology for Calibration and Validation

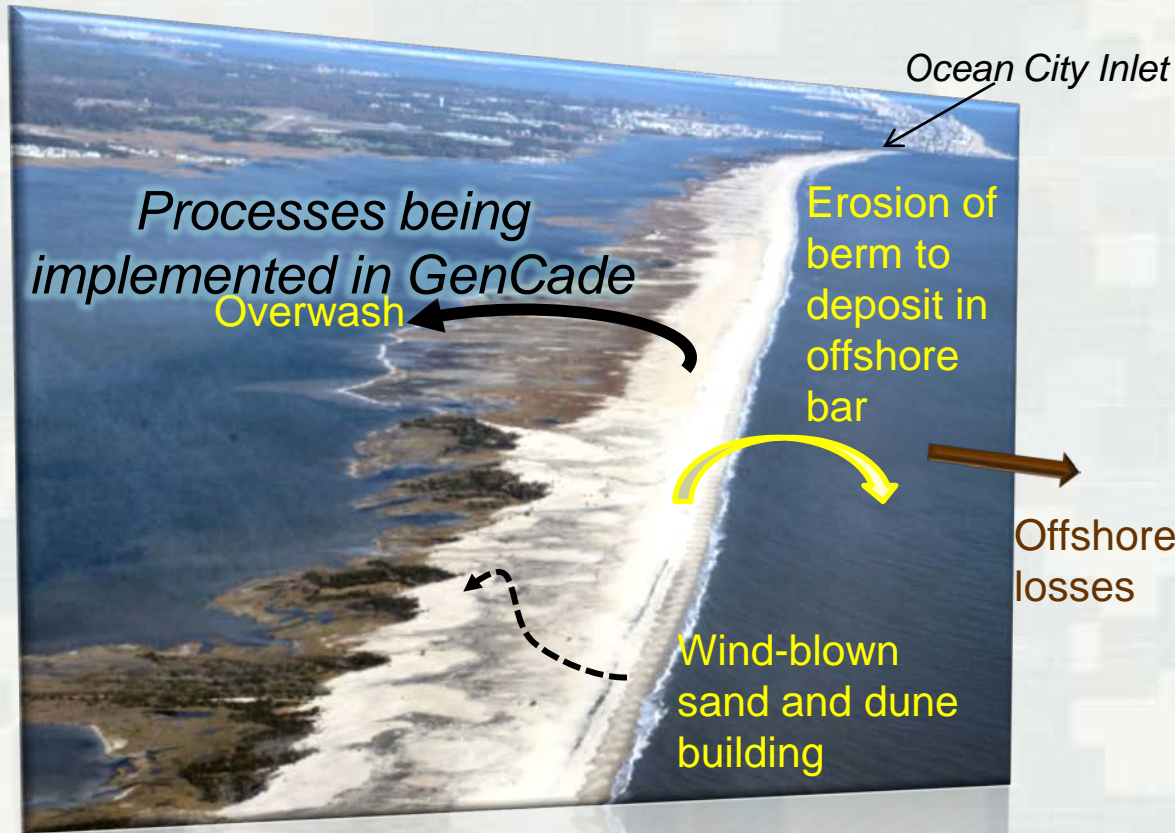
- *Statistical toolkit*
- *Recommended statistics for acceptable Cal/Val*
- *Standard, unified approach*

GenCade V2 Release

- Variable parameters and structures
- Code enhancement
- Output files for SBAS
- Updated documentation for V2 (wiki-TN or TR)

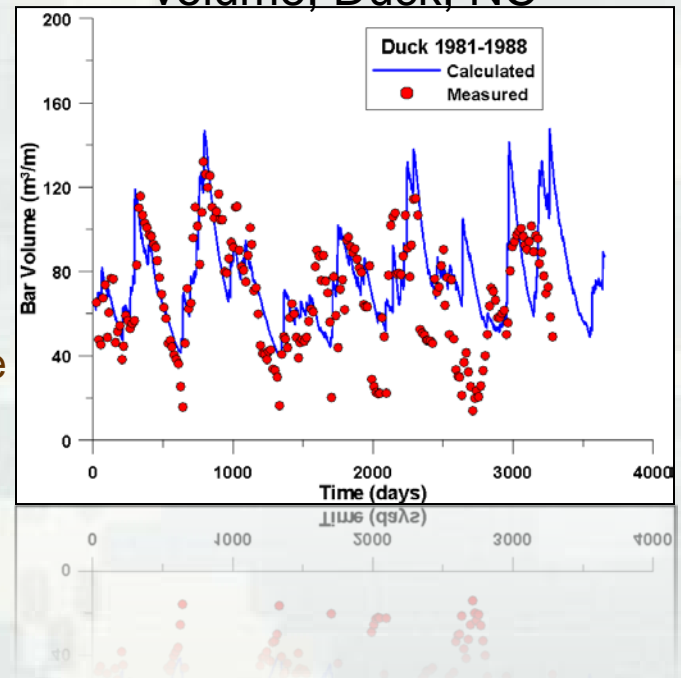


FY13 & Beyond – Cross-shore Transport



Assateague Island, MD

Example comparison between measured and calculated bar volume, Duck, NC

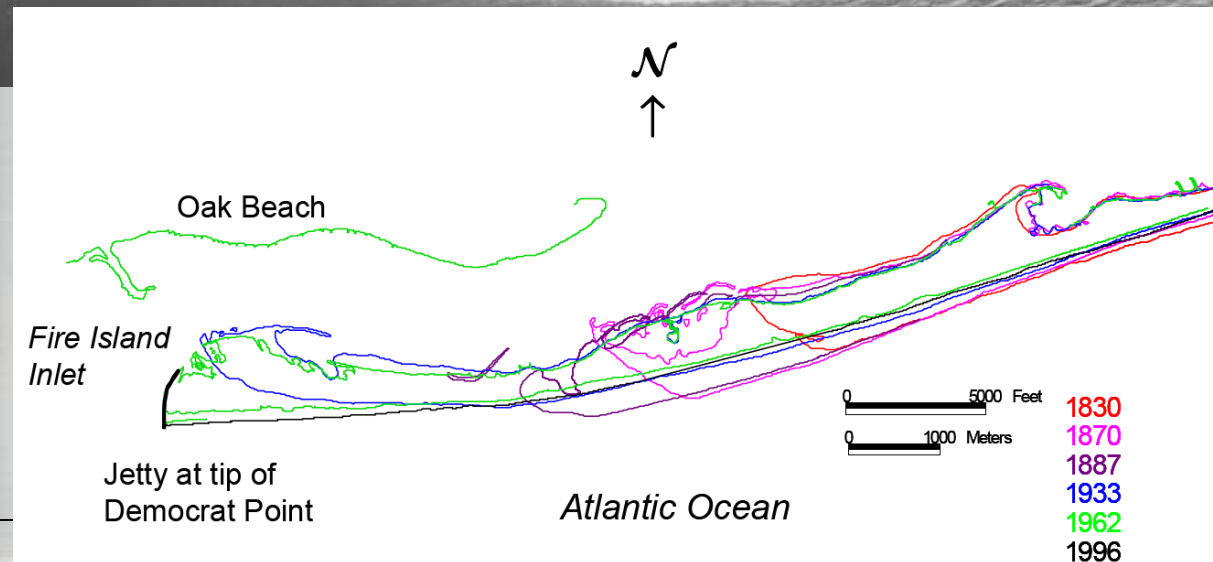
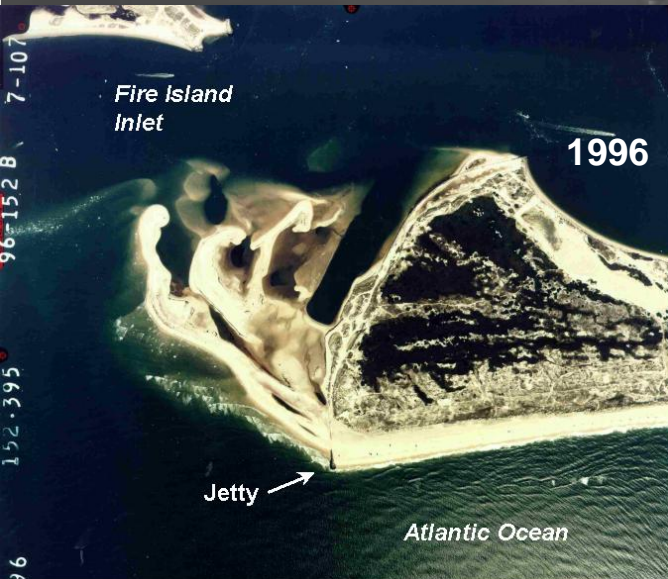


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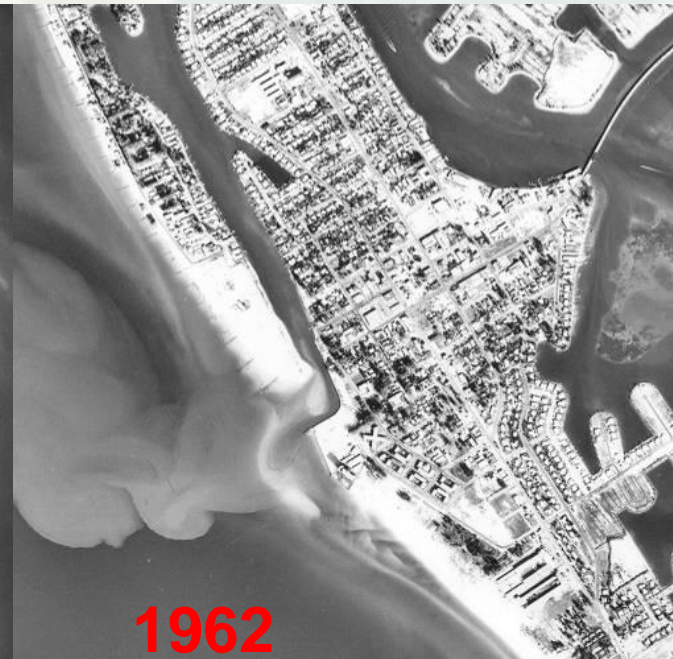
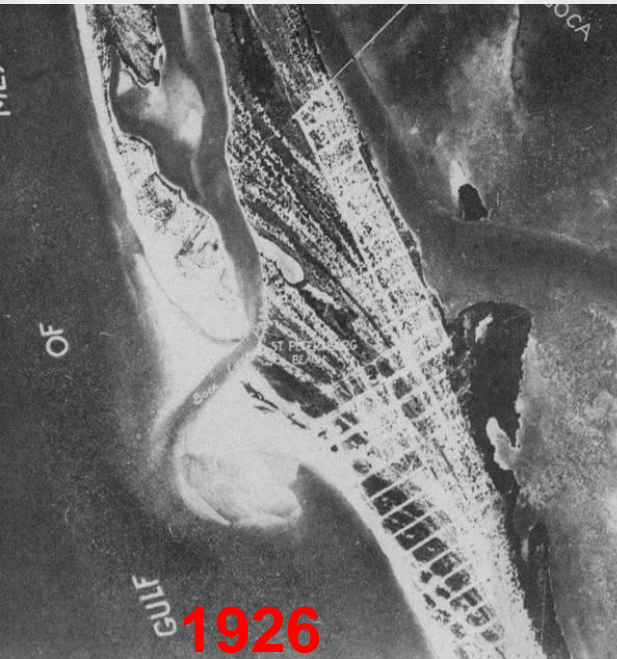
ERDC

Innovative solutions for a safer, better world

FY13 & Beyond – Spit Growth



FY13 & Beyond - Inlet and Barrier Migration



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