A

Geologist
Multibeam Data Coverage
2000 to present
After Mosher and Johnson, 2000
Numerous episodes of uplift & subsidence associated with tectonics and glacial cycles

(Burmester, Blake, & Engebretson, 2000)
Figure 1

Figure 2
Geology = Habitat

* Rockfish sketch provided by ADFG website
Friday Harbor Processed Multibeam/Backscatter Data in 3D
San Juan Archipelago Habitats

- Various unconsolidated features: 75%
- Sediment waves: 9%
- Bedrock: 8%
- Glacial features: 6%
- Sediment covered bedrock: 2%
- Mounds and depressions: 1%
- Anthropogenic: <1%
- Boulders / pinnacles: <1%
Habitat Mapping - Ecosystem Management

Potential Rockfish Habitat (Red areas)

Salish Sea Mapping Effort
MBES Bathymetry (EM 3000 & 3002)
Foraging Habitats
Abundance in Sandwave Field

- If avg. density = 84 fish/m²: 44,556,805 fish
- If light density = 120 fish/m²: 63,742,733 fish
San Juan Channel Sand Waves

Eyeball drop - trough

Eyeball drop - crest

~30 m
Eyeball Drop - Crest
Conclusions

- Marine benthic habitat mapping in the San Juan Archipelago has progressed to the point where other thematic maps can be constructed.
- Value added through focusing on rockfish and PSL sub-tidal habitats.
- Shallow water mapping underway and “white zone” being addressed.
- Eelgrass beds including abundances is being mapped.