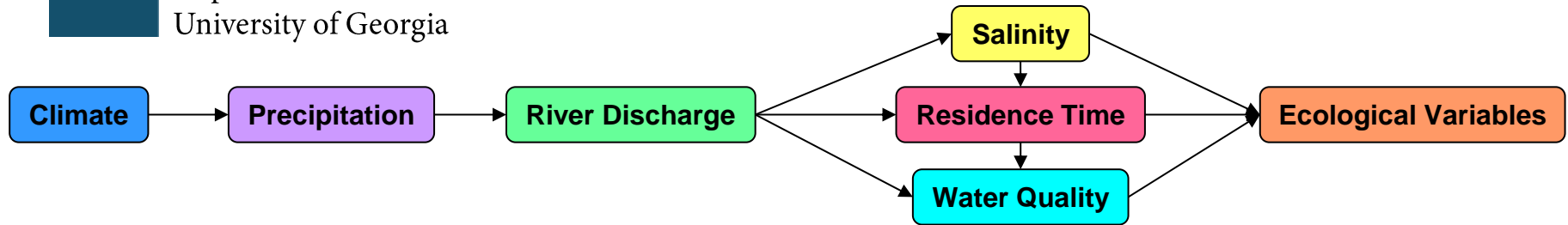
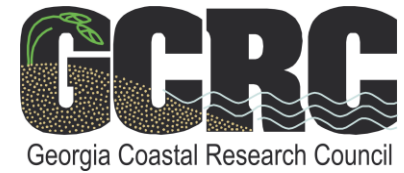


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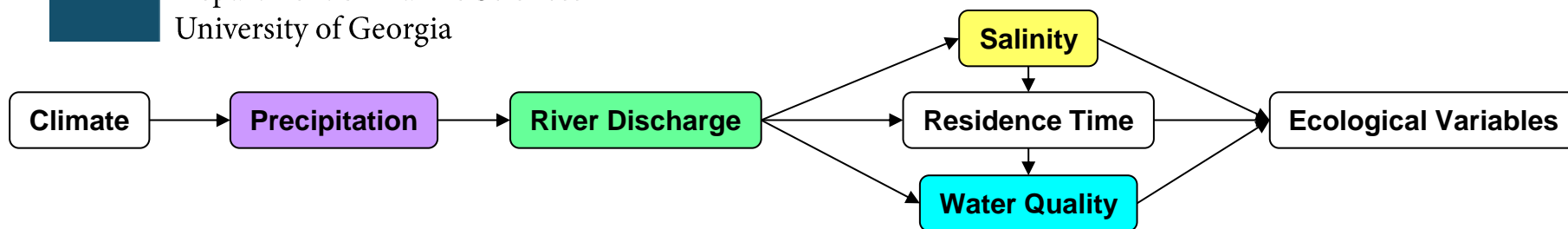
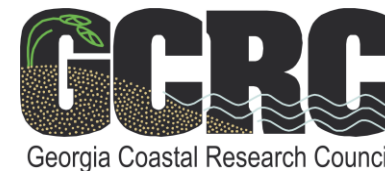
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## Coastal water quality in Georgia

- Analyses of beach sanitary survey data and environmental variables
- Development and Analysis of Water Quality Indicators
- Georgia Coastal Water Quality 2000-2006 brochure
- Georgia Coastal Water Quality 2000-2010 update

### Region 5: Dobby Sound



Dobby Sound is an estuary south of Sapelo Island (see Region 4). It indirectly receives Altamaha River water via the Darien River from the southwest (see Region 6 map), especially during high flow periods. Shellfish harvest areas are currently found in creeks to the north (New Teakettle Creek and Mud River), and the estuary supports commercial and recreational fisheries for blue crabs. This region includes sites sampled through the Sound (pink) and Shellfish (white) monitoring programs.

#### Oxygen

Median dissolved oxygen conditions in 2000 were fair in upper Dobby Sound and good at other sites, with fair extreme conditions throughout the region. Conditions in 2001 were similar except for poor extreme conditions at two upstream creek shellfish sites. In 2002, all sites had good median conditions and fair extreme conditions. Most sites exhibited fair median and extreme conditions during 2003, but improved during 2004-2006 with good median conditions at all sites, although extreme conditions generally remained fair.

#### Nitrogen

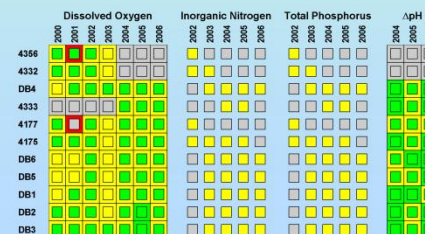
Dissolved inorganic nitrogen was fair during the study period.

#### Phosphorus

Total dissolved phosphorus was fair during the study period.

#### pH

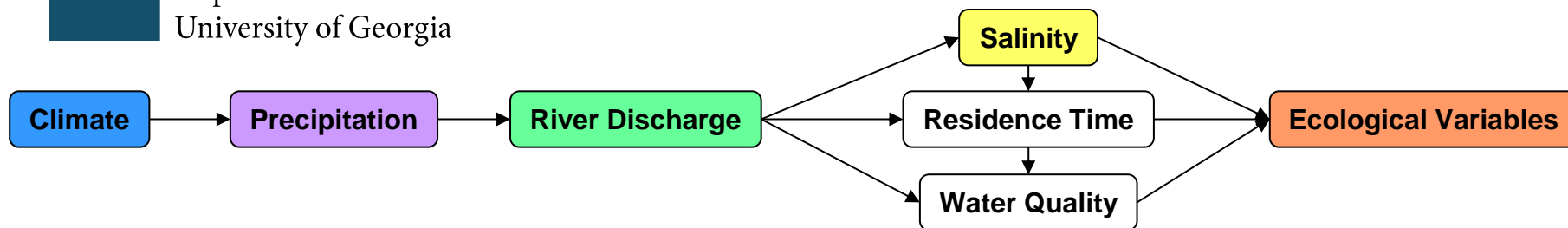
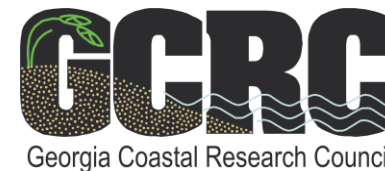
pH criteria are based on fluctuations around the normal condition. pH stability in this region was generally good during the study period, with occasional fair extreme conditions, which were more prevalent in 2005 than in 2004 or 2006. The upstream Old Teakettle Creek shellfish site (4177) had fair extreme conditions each year.



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## Climate effects on inflow to estuaries

- Altamaha River
  - *Spartina* productivity
- Ogeechee/Ossabaw
- Satilla/St. Andrew
- St. Marys/Cumberland
- Shrimp and crab surveys in  
Ossabaw, St. Andrew, and  
Cumberland Sounds

Bermuda High Index Correlations

	J	F	M	A	M	J	J	A	S	O	N	D
Ogeechee												
Precip PC 1												
Discharge												
Altamaha												
Precip PC 1												
Discharge												
Satilla												
Precip PC 1												
Discharge												
St. Marys												
Precip PC 1												
Discharge												

Lighter colors:  $r^2 < 0.09$ , Darker colors:  $r^2 > 0.09$ ;  $p < 0.05$

Southern Oscillation Index Correlations

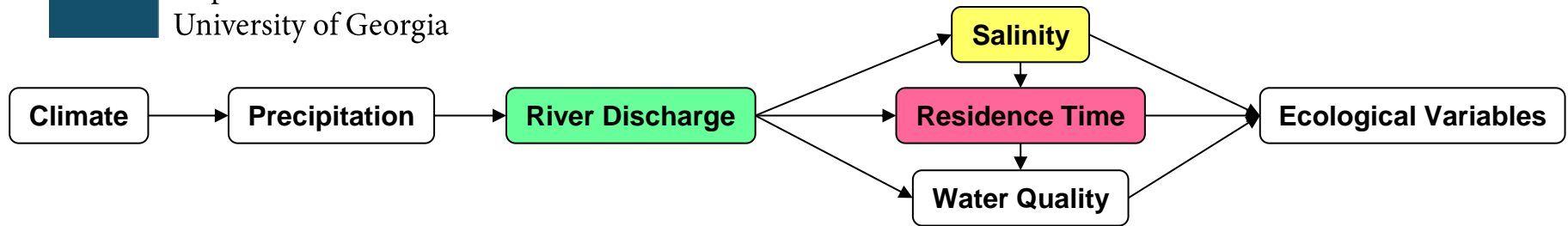
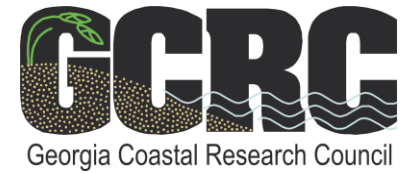
	J	F	M	A	M	J	J	A	S	O	N	D
Ogeechee												
Precip PC 1												
Precip PC 2												
Discharge												
Altamaha												
Precip PC 1												
Precip PC 2												
Discharge												
Satilla												
Precip PC 1												
Discharge												
St. Marys												
Precip PC 1												
Discharge												

Lighter colors:  $r^2 < 0.09$ , Darker colors:  $r^2 > 0.09$ ;  $p < 0.05$

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## SqueezeBox 1-D estuary box modeling framework

- Altamaha
  - WASP parameterization
  - SLAMM salinity
- Ogeechee
- Satilla (current GCRC funding)

