JULY

JUL 1 through JUL 8: Vertically averaged velocities $v_m$ given at time increments equal to one eighth of the tidal period beginning at low tide.

JUL 9: Net values of vertically averaged velocities. Time averaged over one tidal cycle.

JUL 10 through JUL 17: Vertically averaged pollutant concentration corresponding to river concentration $c_R = 100$ and concentration $c_0 = 0$ at all inlets to bay. Concentrations given at time increments equal to one eighth of the tidal period beginning at low tide.
APALACHICOLA BAY
Franklin County, Florida
HYDRODYNAMIC MODEL
Mean Velocity Field

Time After Low Tide: \( t = 0 \times \frac{T}{8} \)
Length Scale: 1 in = 6400 m
Velocity Scale: 1 in = 1 m s\(^{-1}\)

JUL 1
APALACHICOLA BAY
Franklin County, Florida
HYDRODYNAMIC MODEL
Mean Velocity Field

<table>
<thead>
<tr>
<th>Time After Low Tide:</th>
<th>( t = 4 \times \frac{T}{8} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length Scale:</td>
<td>1 in = 6400 m</td>
</tr>
<tr>
<td>Velocity Scale:</td>
<td>1 in = 1 m s(^{-1})</td>
</tr>
</tbody>
</table>

METERS EAST (x10^2)
APALACHICOLA BAY
Franklin County, Florida
HYDRODYNAMIC MODEL
Mean Velocity Field

<table>
<thead>
<tr>
<th>Time After Low Tide:</th>
<th>t = 7 x τ / 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length Scale:</td>
<td>1 in = 6400 m</td>
</tr>
<tr>
<td>Velocity Scale:</td>
<td>1 in = 1 m s⁻¹</td>
</tr>
</tbody>
</table>

METERS EAST (x10²)

JUL 8
Indicated concentrations \( c \) correspond to \( c_R = 100 \) and \( c_0 = 0 \).

Concentrations \( c_1 \) corresponding to \( c_R = c_R \div 100 \) and \( c_0 = c_0 \div 0 \) are found from

\[
  c_1 = c - \frac{c_R - c_0}{100} + c_0
\]

Salinities \( s \) are found from

\[
  s = (1 - \frac{c}{100}) \cdot s_0
\]

where \( s_0 \) = salinity at passes connecting to the Mexican Gulf.

APALACHICOLA BAY
Franklin County, Florida
QUALITY MODEL
\( c_R = 100 \)
\( c_0 = 0 \)

Time After: \( t = 0 \times \frac{T}{8} \)
Low Tide: 1 in = 5800 m
Length Scale:
Indicated concentrations correspond to $c_R = 100$ and $c_O = 0$.

Concentrations $c_1$ corresponding to $c_R = c_R + 100$ and $c_O = c_O + 0$ are found from

$$c_1 = c_R + \frac{c_O}{100} + c_O$$

Salinities $s$ are found from

$$s = (1 - \frac{c_O}{100}) s_O$$

where $s_O$ = salinity at passes connecting to the Mexican Gulf.
Indicated concentrations \( c \) correspond to \( c_R = 100 \) and \( c_0 = 0 \).

Concentrations \( c_1 \) corresponding to \( c_R = c_R \uparrow 100 \) and \( c_0 = c_0 \uparrow 0 \) are found from

\[
c_1 = c \left( \frac{c_R - c_0}{100} + c_0 \right)
\]

Salinities \( s \) are found from

\[
s = (1 - \frac{c_R}{100})s_0
\]

where \( s_0 \) = salinity at passes connecting to the Mexican Gulf.
Indicated concentrations correspond to $c_R = 100$ and $c_0 = 0$.

Concentrations $c_1$ corresponding to $c_R = c_R \div 100$ and $c_0 = c_0 \div 0$ are found from

$$c_1 = c \frac{c_R - c_0}{100} + c_0$$

Salinities $s$ are found from

$$s = (1 - \frac{c}{100}) s_0$$

where $s_0$ = salinity at passes connecting to the Mexican Gulf.

APALACHICOLA BAY
Franklin County, Florida
QUALITY MODEL
$c_R = 100$
$c_0 = 0$

Time After
Low Tide:
$t = 3 \times \frac{T}{8}$

Length Scale: 1 in = 5800 m
Indicated concentrations $c$ correspond to $c_R = 100$ and $c_0 = 0$.

Concentrations $c_1$ corresponding to $c_R = c_R + 100$ and $c_0 = c_0 + 0$ are found from

$$c_1 = c \frac{c_R - c_0}{100} + c_0$$

Salinities $s$ are found from

$$s = \left(1 - \frac{c_1}{100}\right) s_0$$

where $s_0$ = salinity at passes connecting to the Mexican Gulf.

APALACHICOLA BAY
Franklin County, Florida
QUALITY MODEL
$c_R = 100$
$c_0 = 0$

Time After Low Tide: $t = 4 \times \frac{T}{8}$

Length Scale: 1 in = 5800 m

JUL 14
Indicated concentrations correspond to \( c = 100 \) and \( c_0 = 0 \).

Concentrations \( c_1 \) corresponding to \( c_R = c_R + 100 \) and \( c_0 = c_0 + 0 \) are found from

\[
c_1 = c \left( \frac{c_R - c_0}{100} \right) + c_0
\]

Salinities \( s \) are found from

\[
s = (1 - \frac{c}{100}) s_0
\]

where \( s_0 \) = salinity at passes connecting to the Mexican Gulf.

APALACHICOLA BAY
Franklin County, Florida
QUALITY MODEL
\( c_R = 100 \)
\( c_0 = 0 \)

Time After Low Tide: \( t = 5 \times \frac{T}{8} \)
Length Scale: 1 in = 5800 m

JUL 15
Indicated concentrations \( c \) correspond to \( c_R = 100 \) and \( c_0 = 0 \).

Concentrations \( c_1 \) corresponding to \( c_R = c_R + 100 \) and \( c_0 = c_0 + 0 \) are found from

\[
    c_1 = c \left( \frac{c_R - c_0}{100} + c_0 \right)
\]

Salinities \( s \) are found from

\[
    s = (1 - \frac{c}{100}) s_0
\]

where \( s_0 \) = salinity at passes connecting to the Mexican Gulf.

**APALACHICOLA BAY**
Franklin County, Florida
QUALITY MODEL

\[
    c_R = 100
    c_0 = 0
\]

Time After Low Tide: \( t = 6 \times \frac{T}{8} \)

Length Scale: 1 in = 5800 m

JUL 16
Indicated concentrations \( c \) correspond to \( c_R = 100 \) and \( c_0 = 0 \).

Concentrations \( c_1 \) corresponding to \( c_R = c_R \div 100 \) and \( c_0 = c_0 \div 0 \) are found from

\[
c_1 = c \left( \frac{c_R - c_0}{100} + c_0 \right)
\]

Salinities \( s \) are found from

\[
s = \left( 1 - \frac{c}{100} \right) s_0
\]

where \( s_0 \) = salinity at passes connecting to the Mexican Gulf.

APALACHICOLA BAY
Franklin County, Florida
QUALITY MODEL
\[c_R = 100\]
\[c_0 = 0\]

Time After Low Tide:
\[t = 7 \times \frac{1}{8}\]

Length Scale: 1 in = 5800 m

JUL 17
AUGUST

AUG 1 through AUG 8: Vertically averaged velocities $v_m$
given at time increments equal to
one eighth of the tidal period
beginning at low tide.

AUG 9: Net values of vertically averaged
velocities. Time averaged over one
 tidal cycle.

AUG 10 through AUG 17: Vertically averaged pollutant
congestion corresponding to
river congestion $c_R = 100$ and
concentration $c_0 = 0$ at all inlets
to bay. Concentrations given at
time increments equal to one eighth
of the tidal period beginning at low
tide.
APALACHICOLA BAY
Franklin County, Florida
HYDRODYNAMIC MODEL
Mean Velocity Field

Time After Low Tide: \( t = 7 \times \frac{T}{8} \)
Length Scale: 1 in = 6400 m
Velocity Scale: 1 in = 1 m s\(^{-1}\)

AUG 8
Indicated concentrations $c$ correspond to $c_R = 100$ and $c_0 = 0$.

Concentrations $c_1$ corresponding to $c_R = c_R \div 100$ and $c_0 = c_0 \div 0$ are found from

$$c_1 = c \frac{c_R - c_0}{100} + c_0$$

Salinities $s$ are found from

$$s = (1 - \frac{c}{100}) s_0$$

where $s_0$ = salinity at passes connecting to the Mexican Gulf.
Indicated concentrations \( c \) correspond to \( c_R = 100 \) and \( c_0 = 0 \).

Concentrations \( c_1 \) corresponding to \( c_R = c_R \div 100 \) and \( c_0 = c_0 \div 0 \) are found from

\[
c_1 = c \left( \frac{c_R - c_0}{100} + c_0 \right)
\]

Salinities \( s \) are found from

\[
s = (1 - \frac{c_R}{100}) s_0
\]

where \( s_0 \) = salinity at passes connecting to the Mexican Gulf.

**APALACHICOLA BAY**
Franklin County, Florida
QUALITY MODEL

\( c_R = 100 \)
\( c_0 = 0 \)

Time After Low Tide: \( t = 1 \times \frac{T}{8} \)

Length Scale: 1 in = 5800 m

AUG 11
Indicated concentrations correspond to \( c_R = 100 \) and \( c_0 = 0 \).

Concentrations \( c_1 \) corresponding to \( c_R = c_R \div 100 \) and \( c_0 = c_0 \div 0 \) are found from

\[
c_1 = c \times \frac{c_R - c_0}{100} + c_0
\]

Salinities \( s \) are found from

\[
s = (1 - \frac{c}{100}) s_0
\]

where \( s_0 \) = salinity at passes connecting to the Mexican Gulf.

APALACHICOLA BAY
Franklin County, Florida
QUALITY MODEL

\[
\begin{align*}
\text{Time After} & = t = 2 \times \frac{T}{8} \\
\text{Low Tide} & \\
\text{Length Scale} & = 1 \text{ in} = 5800 \text{ m}
\end{align*}
\]
Indicated concentrations $c$ correspond to $c_R = 100$ and $c_0 = 0$.

Concentrations $c_1$ corresponding to $c_R = c_R + 100$ and $c_0 = c_0 + 0$ are found from

$$c_1 = c - \frac{c_R - c_0}{100} + c_0$$

Salinities $s$ are found from

$$s = (1 - \frac{c}{100}) s_0$$

where $s_0$ = salinity at passes connecting to the Mexican Gulf.
Indicated concentrations \( c \) correspond to \( c_R = 100 \) and \( c_0 = 0 \).

Concentrations \( c_1 \) corresponding to \( c_R = c_R \div 100 \) and \( c_0 = c_0 \div 0 \) are found from

\[
\frac{c_1}{c} = \frac{c_R - c_0}{100} + c_0
\]

Salinities \( s \) are found from

\[
s = \left(1 - \frac{c}{100}\right) s_0
\]

where \( s_0 = \) salinity at passes connecting to the Mexican Gulf.
Indicated concentrations \( c \) correspond to 
\( c_R = 100 \) and \( c_0 = 0 \).

Concentrations \( c_1 \) corresponding to 
\( c_R = c_R + 100 \) and \( c_0 = c_0 + 0 \) are found from
\[
    c_1 = c \frac{c_R - c_0}{100} + c_0
\]

Salinities \( s \) are found from
\[
    s = \left(1 - \frac{c}{100}\right) s_0
\]

where \( s_0 \) = salinity at passes connecting to the Mexican Gulf.

**APALACHICOLA BAY**
Franklin County, Florida

QUALITY MODEL

\( c_R = 100 \)
\( c_0 = 0 \)

Time After
Low Tide:
\[ t = 5 \times \frac{T}{8} \]

Length Scale: 1 in = 5800 m
Indicated concentrations $c$ correspond to $c_R = 100$ and $c_o = 0$.

Concentrations $c_1$ corresponding to $c_R = c_R \div 100$ and $c_o = c_o \div 0$ are found from
$$c_1 = c \frac{c_R - c_o}{100} + c_o$$

Salinities $s$ are found from
$$s = (1 - \frac{c}{100}) s_0$$
where $s_0$ = salinity at passes connecting to the Mexican Gulf.
Indicated concentrations $c$ correspond to $c_R = 100$ and $c_0 = 0$.

Concentrations $c_i$ corresponding to $c_R = c_R \uparrow 100$ and $c_0 = c_0 \uparrow 0$ are found from

$$c_i = c_R - c_0$$

Salinities $s$ are found from

$$s = (1 - \frac{c}{100}) s_0$$

where $s_0 = \text{salinity at passes connecting to the Mexican Gulf}$. 

APALACHICOLA BAY
Franklin County, Florida
QUALITY MODEL
$c_R = 100$
$c_0 = 0$

Time After Low Tide: $t = 7 \times \frac{T}{8}$

Length Scale: 1 in = 5800 m

AUG 17
SEP TEMBER

SEP 1 through SEP 8: Vertically averaged velocities $v_m$
given at time increments equal to
one eighth of the tidal period
beginning at low tide.

SEP 9: Net values of vertically averaged velocities. Time averaged over one tidal cycle.

SEP 10 through SEP 17: Vertically averaged pollutant concentration corresponding to
river concentration $c_R = 100$ and
concentration $c_o = 0$ at all inlets
to bay. Concentrations given at
time increments equal to one eighth
of the tidal period beginning at low tide.
APALACHICOLA BAY
Franklin County, Florida
HYDRODYNAMIC MODEL
Mean Velocity Field

Time After Low Tide: \( t = 5 \times \frac{T}{8} \)
Length Scale: 1 in = 6400 m
Velocity Scale: 1 in = 1 m s\(^{-1}\)

SEP 6
APALACHICOLA BAY
Franklin County, Florida
HYDRODYNAMIC MODEL
Mean Velocity Field

Time After Low Tide:
$t = 7 \times \frac{t}{8}$

Length Scale: 1 in = 6400 m
Velocity Scale: 1 in = 1 m s$^{-1}$
Indicated concentrations $c$ correspond to $c_R = 100$ and $c_0 = 0$.

Concentrations $c_1$ corresponding to $c_R = c_R \div 100$ and $c_0 = c_0 \div 0$ are found from

$$c_1 = c - \frac{c_R - c_0}{100} + c_0$$

Salinities $s$ are found from

$$s = (1 - \frac{c}{100}) s_0$$

where $s_0 =$ salinity at passes connecting to the Mexican Gulf.

APALACHICOLA BAY
Franklin County, Florida
QUALITY MODEL
$c_R = 100$
$c_0 = 0$

Time After
Low Tide: $t = 0 \times \frac{T}{8}$

Length Scale: 1 in. = 5800 m

SEP 10
Indicated concentrations \( c \) correspond to \( c_R = 100 \) and \( c_0 = 0 \).

Concentrations \( c_1 \) corresponding to \( c_R = c_R \pm 100 \) and \( c_0 = c_0 \pm 0 \) are found from
\[
c_1 = c \left( \frac{c_R - c_0}{100} + c_0 \right)
\]

Salinities \( s \) are found from
\[
s = (1 - \frac{c}{100}) s_0
\]
where \( s_0 \) = salinity at passes connecting to the Mexican Gulf.

APALACHICOLA BAY
Franklin County, Florida
QUALITY MODEL
\( c_R = 100 \)
\( c_0 = 0 \)

Time After Low Tide: \( t = 1 \times \frac{T}{8} \)
Length Scale: 1 in = 5800 m

SEP 11
Indicated concentrations $c$ correspond to $c_R = 100$ and $c_0 = 0$.

Concentrations $c_I$ corresponding to $c_R = c_R \cdot 100$ and $c_0 = c_0 \cdot 0$ are found from

$$c_I = c \cdot \frac{c_R - c_0}{100} + c_0$$

Salinities $s$ are found from

$$s = (1 - \frac{c}{100}) s_0$$

where $s_0$ = salinity at passes connecting to the Mexican Gulf.

---

**APALACHICOLA BAY**
Franklin County, Florida
QUALITY MODEL
$c_R = 100$
$c_0 = 0$

Time After Low Tide: $t = 2 \times \frac{T}{8}$

Length Scale: 1 in = 5800 m
Indicated concentrations \( c \) correspond to 
\[ c_R = 100 \text{ and } c_0 = 0. \]

Concentrations \( c_1 \) corresponding to 
\[ c_R = c_R \div 100 \text{ and } c_0 = c_0 \div 0 \]
are found from 
\[ c_1 = c \frac{c_R - c_0}{100} + c_0. \]

Salinities \( s \) are found from 
\[ s = \left( 1 - \frac{c}{100} \right) s_0, \]
where \( s_0 \) = salinity at passes connecting to the Mexican Gulf.

APALACHICOLA BAY
Franklin County, Florida
QUALITY MODEL
\[ c_R = 100, \quad c_0 = 0. \]

Time After 
Low Tide: \[ t = 3 \times \frac{T}{8} \]

Length Scale: 1 in = 5800 m

SEP 13
Indicated concentrations $c$ correspond to $c_R = 100$ and $c_0 = 0$.

Concentrations $c_1$ corresponding to $c_R = c_R \div 100$ and $c_0 = c_0 \div 0$ are found from

$$c_1 = c \left( \frac{c_R - c_0}{100} + c_0 \right)$$

Salinities $s$ are found from

$$s = (1 - \frac{c}{100}) s_0$$

where $s_0 =$ salinity at passes connecting to the Mexican Gulf.

APALACHICOLA BAY
Franklin County, Florida
QUALITY MODEL
$c_R = 100$
$c_0 = 0$

Time After Low Tide: $t = 4 \times \frac{T}{8}$

Length Scale: 1 in = 5800 m
Indicated concentrations $c$ correspond to $c_R = 100$ and $c_o = 0$.

Concentrations $c_1$ corresponding to $c_R = c_R \div 100$ and $c_o = c_o \div 0$ are found from

$$c_1 = c - \frac{c_R}{100} + c_o$$

Salinities $s$ are found from

$$s = (1 - \frac{c}{100}) s_o$$

where $s_o$ = salinity at passes connecting to the Mexican Gulf.

**APALACHICOLA BAY**
Franklin County, Florida
QUALITY MODEL
$c_R = 100$
$c_o = 0$

Time After Low Tide: $t = 5 \times \frac{T}{8}$

Length Scale: 1 in = 5800 m

SEP 15
Indicated concentrations \( c \) correspond to 
\[ c_R = 100 \text{ and } c_0 = 0. \]

Concentrations \( c_1 \) corresponding to 
\[ c_R = c_R + 100 \text{ and } c_0 = c_0 + 0 \text{ are found from} \]
\[ c_1 = c \left( \frac{c_R - c_0}{100} \right) + c_0. \]

Salinities \( s \) are found from
\[ s = (1 - \frac{c}{100}) s_0, \]
where \( s_0 \) = salinity at passes connecting to the Mexican Gulf.

**APALACHICOLA BAY**
Franklin County, Florida
QUALITY MODEL
\[ c_R = 100 \]
\[ c_0 = 0 \]

Time After Low Tide:
\[ t = 6 \times \frac{T}{8} \]

Length Scale: 1 in = 5800 m

SEP 16
Indicated concentrations $c$ correspond to $c_R = 100$ and $c_0 = 0$.

Concentrations $c_1$ corresponding to $c_R = c_R + 100$ and $c_0 = c_0 + 0$ are found from

$$c_1 = c \left( \frac{c_R - c_0}{100} + c_0 \right)$$

Salinities $s$ are found from

$$s = (1 - \frac{c}{100}) s_0$$

where $s_0 =$ salinity at passes connecting to the Mexican Gulf.

**APALACHICOLA BAY**

Franklin County, Florida

**QUALITY MODEL**

$c_R = 100$

$c_0 = 0$

Time After Low Tide: $t = 7 \times \frac{1}{8}$

Length Scale: 1 in = 5800 m