Appendix B.  Maps Showing Simulated Water-Surface Altitude Changes Between Model Scenarios and Original Model
Figure B1. Simulated water-surface altitude changes for the remove-peninsula scenario for a water-surface altitude of 181.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.
Figure B2. Simulated water-surface altitude changes for the remove-peninsula scenario for a water-surface altitude of 184.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.
Figure B3. Simulated water-surface altitude changes for the remove-peninsula scenario for a water-surface altitude of 187.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.
Figure B4. Simulated water-surface altitude changes for the remove-peninsula scenario for a water-surface altitude of 192.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.
Figure B5. Simulated water-surface altitude changes for the increase-bridge-opening scenario for a water-surface altitude of 181.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.
Figure B6. Simulated water-surface altitude changes for the increase-bridge-opening scenario for a water-surface altitude of 184.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.
Simulated water-surface altitude changes for the increase-bridge-opening scenario for a water-surface altitude of 187.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.
Figure B8. Simulated water-surface altitude changes for the increase-bridge-opening scenario for a water-surface altitude of 192.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.
Simulated water-surface altitude changes for the east-culvert scenario for a water-surface altitude of 181.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.
Figure B10. Simulated water-surface altitude changes for the east-culvert scenario for a water-surface altitude of 184.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.
Figure B11. Simulated water-surface altitude changes for the east-culvert scenario for a water-surface altitude of 187.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.
Figure B12. Simulated water-surface altitude changes for the east-culvert scenario for a water-surface altitude of 192.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.
Figure B13. Simulated water-surface altitude changes for the west-and-east-culvert scenario for a water-surface altitude of 181.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.
Figure B14. Simulated water-surface altitude changes for the west-and-east-culvert scenario for a water-surface altitude of 184.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.
Figure B15. Simulated water-surface altitude changes for the west-and-east-culvert scenario for a water-surface altitude of 187.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.
Figure B16. Simulated water-surface altitude changes for the west-and-east-culvert scenario for a water-surface altitude of 192.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.

Hydrography from U.S. Geological Survey digital files, 2007; roads from Georgia Department of Transportation digital files, 2006
Figure B17. Simulated water-surface altitude changes for the oxbow-overflow scenario for a water-surface altitude of 181.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.
Figure B18. Simulated water-surface altitude changes for the oxbow-overflow scenario for a water-surface altitude of 184.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.
Figure B19. Simulated water-surface altitude changes for the oxbow-overflow scenario for a water-surface altitude of 187.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.
Simulated water-surface altitude changes for the oxbow-overflow scenario for a water-surface altitude of 192.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.

**EXPLANATION**

Water-surface altitude change, in feet

<table>
<thead>
<tr>
<th>Water-surface altitude change (feet)</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than –1.0</td>
<td>Blue</td>
</tr>
<tr>
<td>–1.0 to –0.7</td>
<td>Dark blue</td>
</tr>
<tr>
<td>–0.6 to –0.4</td>
<td>Medium blue</td>
</tr>
<tr>
<td>–0.3 to –0.2</td>
<td>Light blue</td>
</tr>
<tr>
<td>–0.1</td>
<td>White</td>
</tr>
<tr>
<td>0</td>
<td>White</td>
</tr>
<tr>
<td>0.1</td>
<td>White</td>
</tr>
<tr>
<td>0.2 to 0.3</td>
<td>Medium purple</td>
</tr>
<tr>
<td>0.4 to 0.6</td>
<td>Light purple</td>
</tr>
<tr>
<td>0.7 to 1.0</td>
<td>Dark purple</td>
</tr>
<tr>
<td>Greater than 1.0</td>
<td>Purple</td>
</tr>
</tbody>
</table>

**Study area**

**USGS streamgage**

Water-surface altitude at gage:
192.5 feet NAVD 88
Gage stage: 43 feet
Inflow: 123,000 cubic feet per second

Hydrography from U.S. Geological Survey digital files, 2007; roads from Georgia Department of Transportation digital files, 2006

**Figure B20.** Simulated water-surface altitude changes for the oxbow-overflow scenario for a water-surface altitude of 192.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.
Figure B21. Simulated water-surface altitude changes for the oxbow-channel scenario for a water-surface altitude of 181.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.
Figure B22. Simulated water-surface altitude changes for the oxbow-channel scenario for a water-surface altitude of 184.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.
Figure B23. Simulated water-surface altitude changes for the oxbow-channel scenario for a water-surface altitude of 187.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.
Figure B24. Simulated water-surface altitude changes for the oxbow-channel scenario for a water-surface altitude of 192.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.
Figure B25. Simulated water-surface altitude changes for the no-bridge scenario for a water-surface altitude of 181.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.
Figure B26. Simulated water-surface altitude changes for the no-bridge scenario for a water-surface altitude of 184.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.
Figure B27. Simulated water-surface altitude changes for the no-bridge scenario for a water-surface altitude of 187.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.
Figure B28. Simulated water-surface altitude changes for the no-bridge scenario for a water-surface altitude of 192.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.
Evaluation of Floodplain Modifications to Reduce the Effect of Floods Using a Two-Dimensional Hydrodynamic Model

Figure B29. Simulated water-surface altitude changes for the combination west-and-east-culvert and oxbow-overflow scenario for a water-surface altitude of 181.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.
EXPLANATION

Water-surface altitude change, in feet

- Less than –1.0
- –1.0 to –0.7
- –0.6 to –0.4
- –0.3 to –0.2
- –0.1
- 0
- 0.1
- 0.2 to 0.3
- 0.4 to 0.6
- 0.7 to 1.0
- Greater than 1.0

Study area

USGS streamgage

Flint River at Albany, Georgia (02352500)

Water-surface altitude at gage:
184.5 feet NAVD 88
Gage stage: 35 feet
Inflow: 75,400 cubic feet per second

Figure B30. Simulated water-surface altitude changes for the combination west-and-east-culvert and oxbow-overflow scenario for a water-surface altitude of 184.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.
Figure B31. Simulated water-surface altitude changes for the combination west-and-east-culvert and oxbow-overflow scenario for a water-surface altitude of 187.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.
Figure B32. Simulated water-surface altitude changes for the combination west-and-east-culvert and oxbow-overflow scenario for a water-surface altitude of 192.5 feet at the Albany streamgage, for the Flint River in Albany, Georgia.