

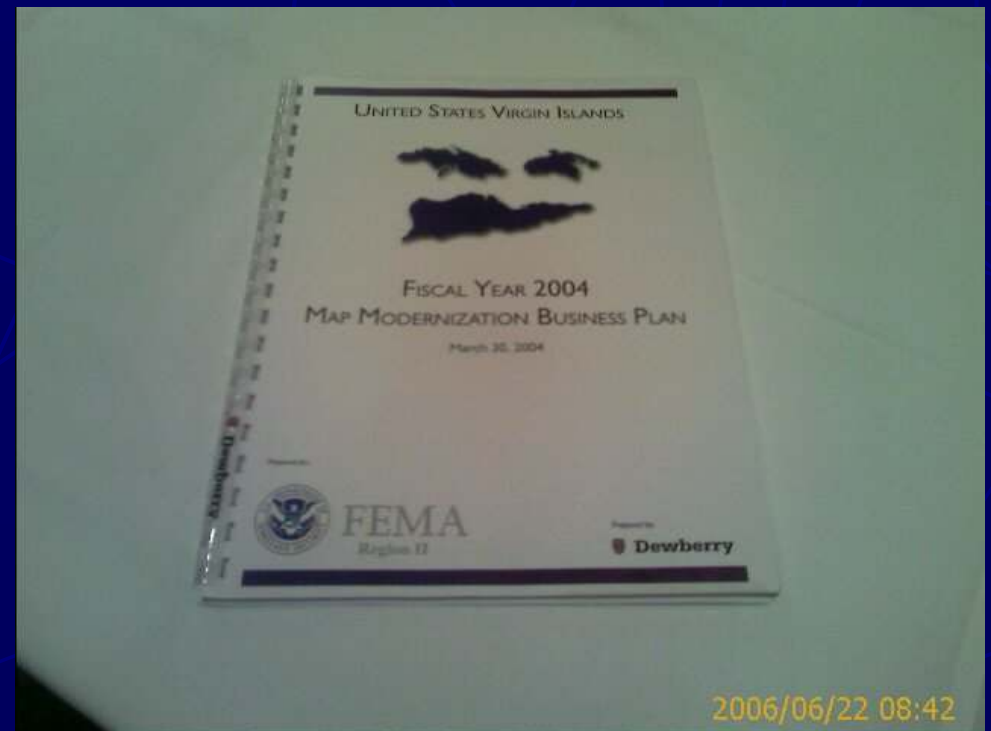
Change Analysis of The U.S.V.I.'s New FIRM Maps



Alexis Doward & Loren Lewis
of
Department of Planning And Natural Resources
Office of Building Permits,
Flood Plain Coordinators

Map Modernization Plan

- ▶ In 2004 the USVI participated in FEMA's Multi-Hazard Flood Map Modernization Program.



- ▶ At the request of DPNR, FEMA entered the Territory into the Map Modernization Program.



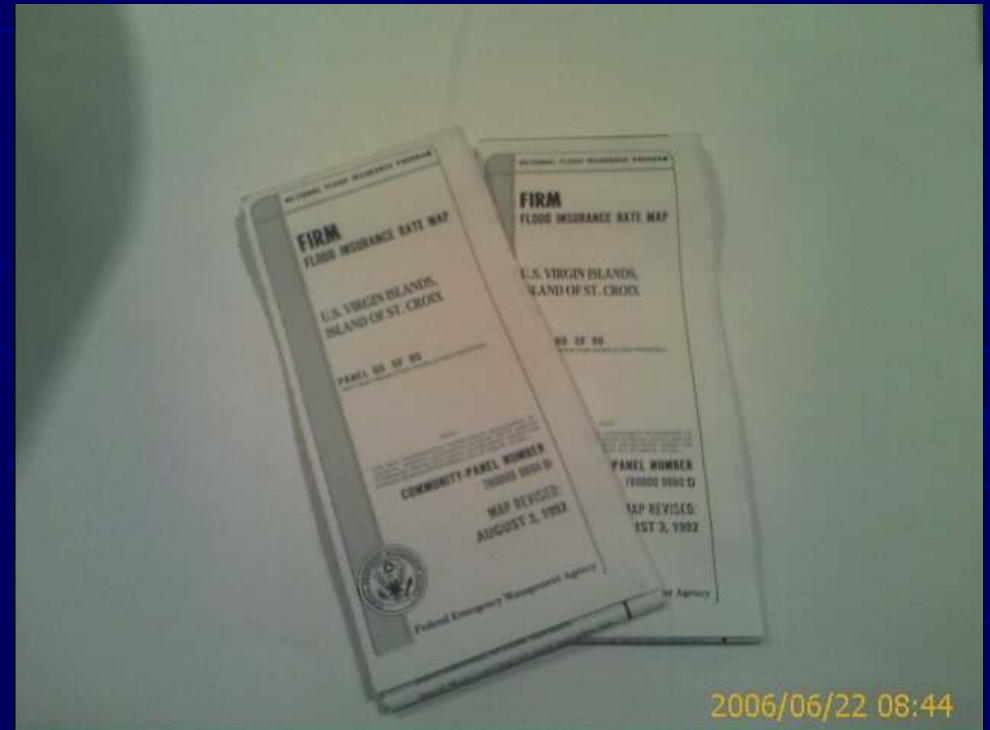
Why is map revision needed?

- ▶ There has been several recent flooding disasters in the USVI:
 - Hurricane Hugo in 1989
 - Hurricane Andrew in 1992
 - Hurricane Marilyn in 1995
 - Hurricane Lenny in 1999
- ▶ All of these disasters have shown the importance of the FEMA Flood Insurance Maps (FIRM) and Flood Insurance Studies (FIS) in both responding to disaster and flood mitigation.

- ▶ Plan Reviewers at DPNR realized, the flood maps that they are in use by the Territory in managing its flood plains, are outdated and don't accurately depict flood conditions.



- ▶ Several areas identified on the maps as flood hazard areas are not affected by flooding were as, areas that were not located in the flood plain needed to be included.

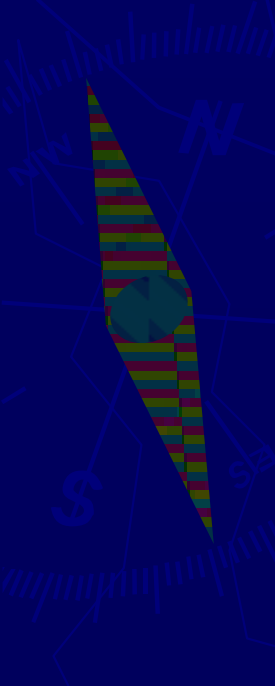


- ▶ Coastal High Hazard Areas vulnerable to storm surge do not have accurate BFEs (Base Flood Elevations).

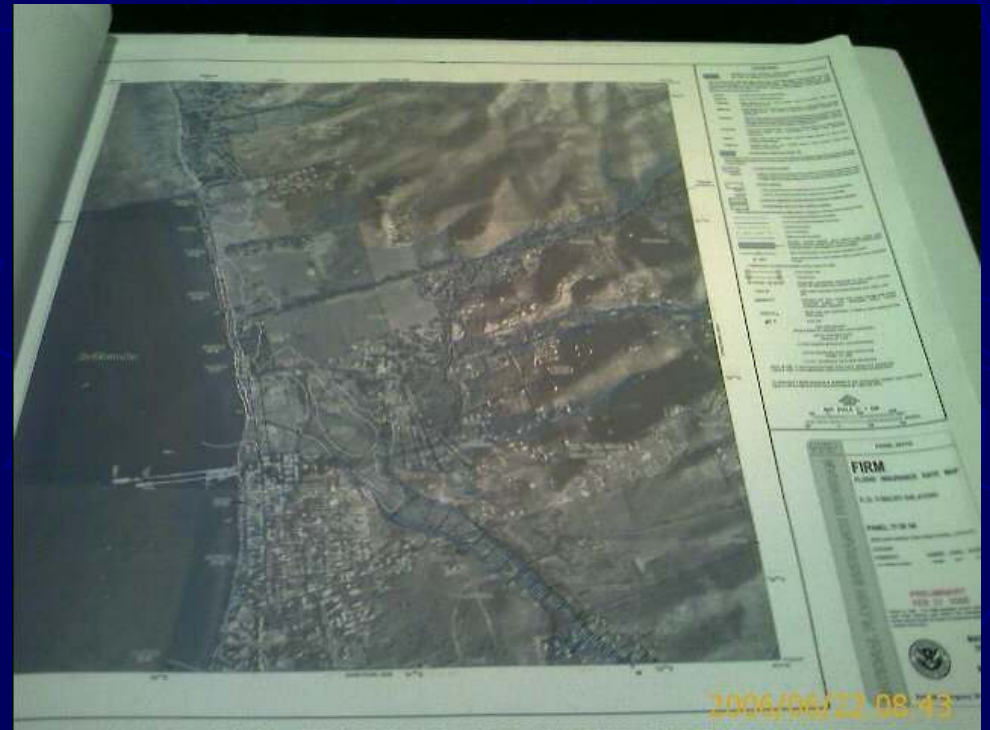


Realizing This

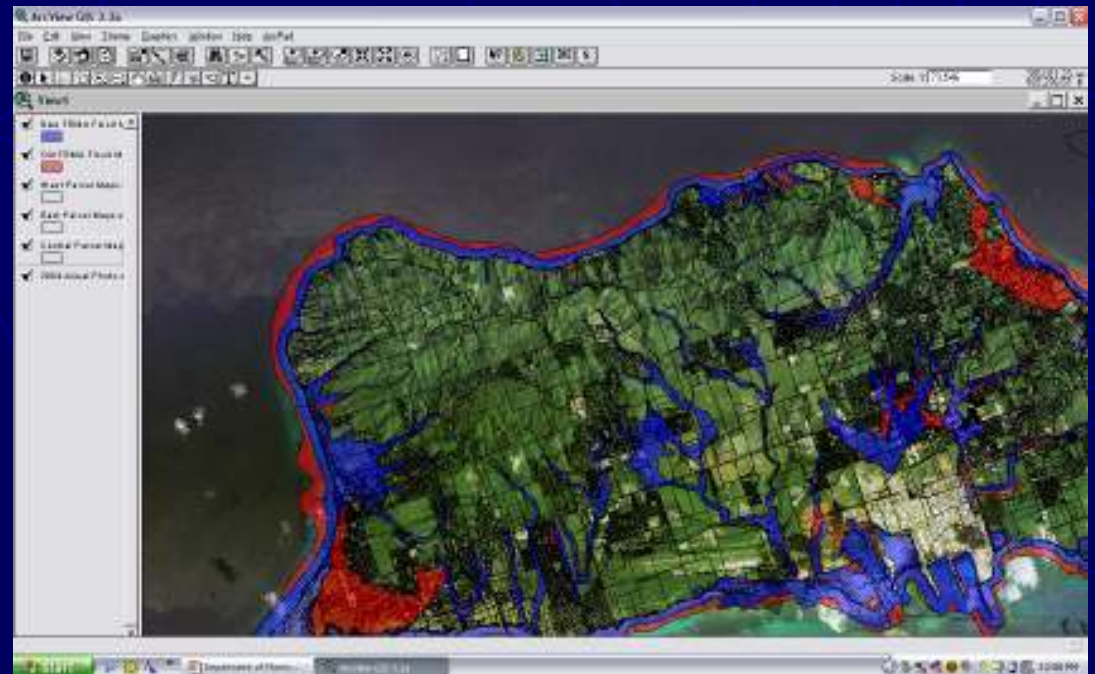
- ▶ The Territory was entered into a 5 year plan to:
 1. Study the Flood Plains of the Territory.
 2. Remap the Territory's Flood Plains.
 3. Adopt New Flood Maps
 4. Publish and Distribute New Maps



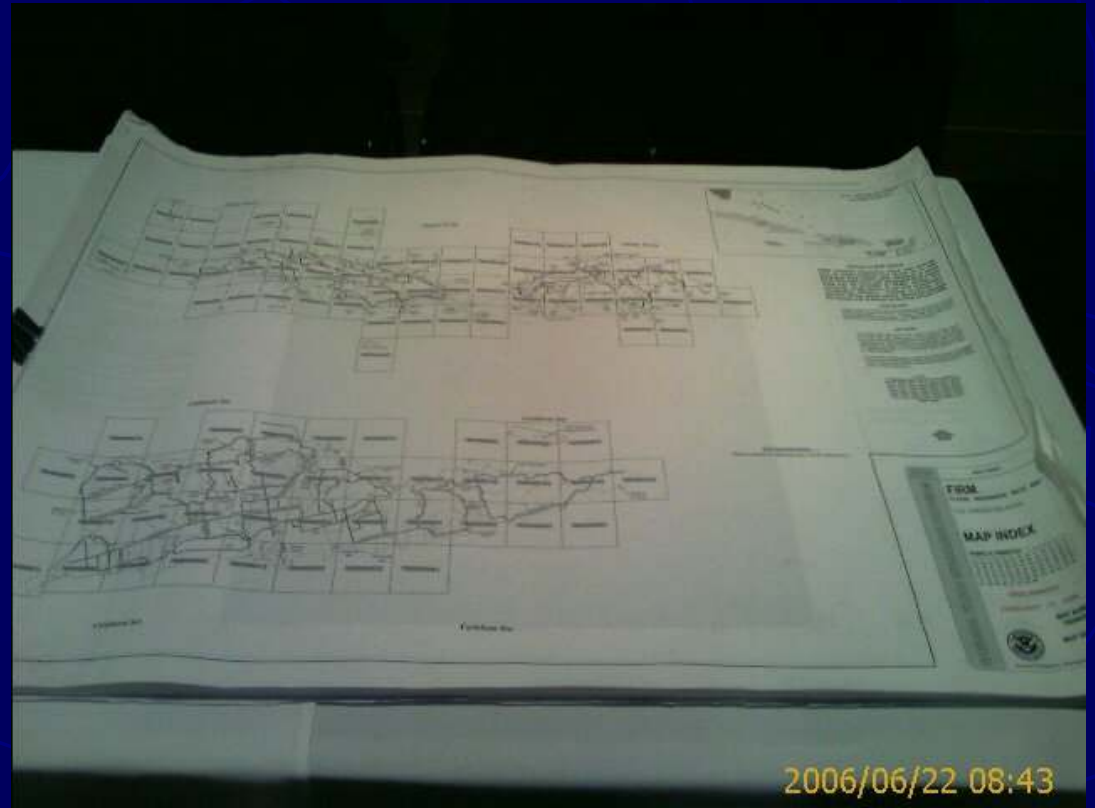
- ▶ 2005 – 2006 Draft Maps were created including the new flood information and aerial photography.



- ▶ Maps were also created in digital format using the mapping database software structure called GIS (Geographic Information System).



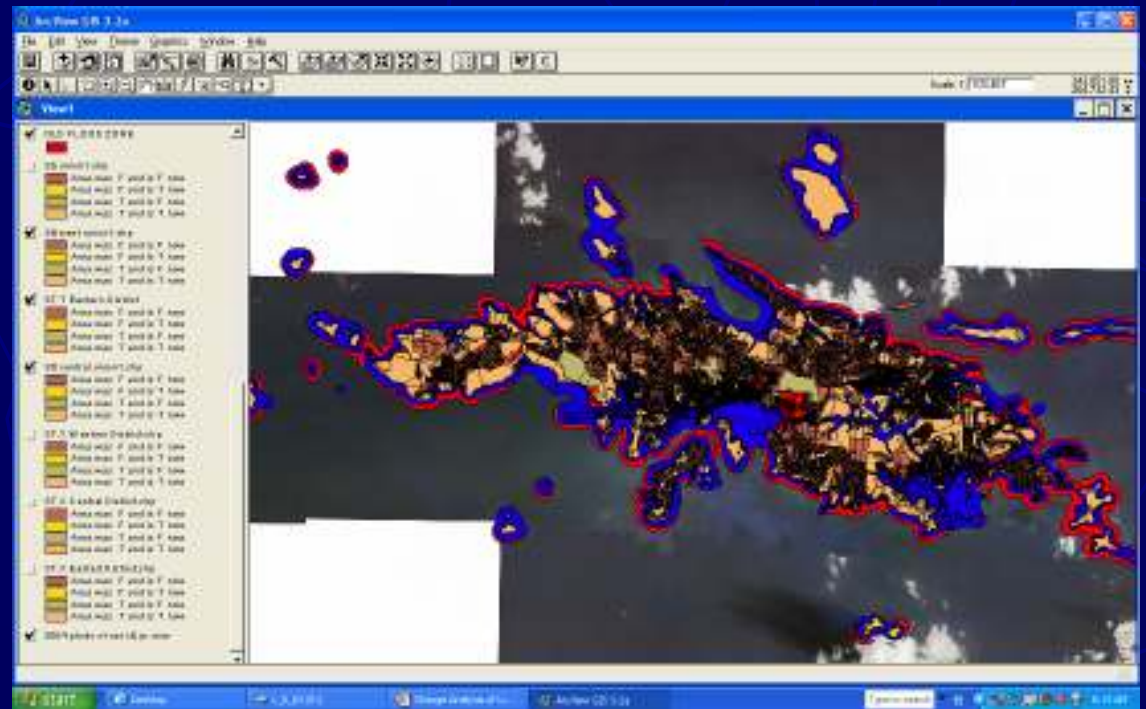
- ▶ 2006 Maps in Hard Copy and in Digital format was delivered to the Territory for Public Review and Comment period.



- ▶ Once receiving the new maps, the hard copy maps were reviewed and analyzed for accuracy.

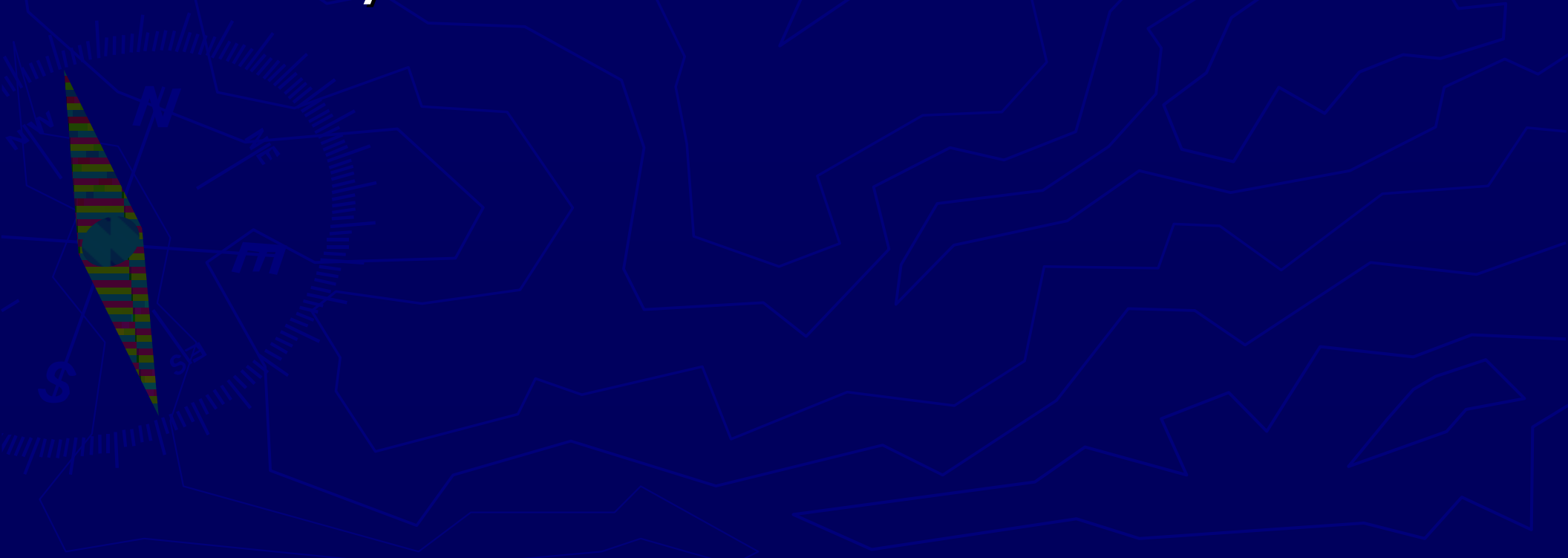


- ▶ On the digital GIS Data a Change Analysis was conducted to identify how many lots were affected by the change.

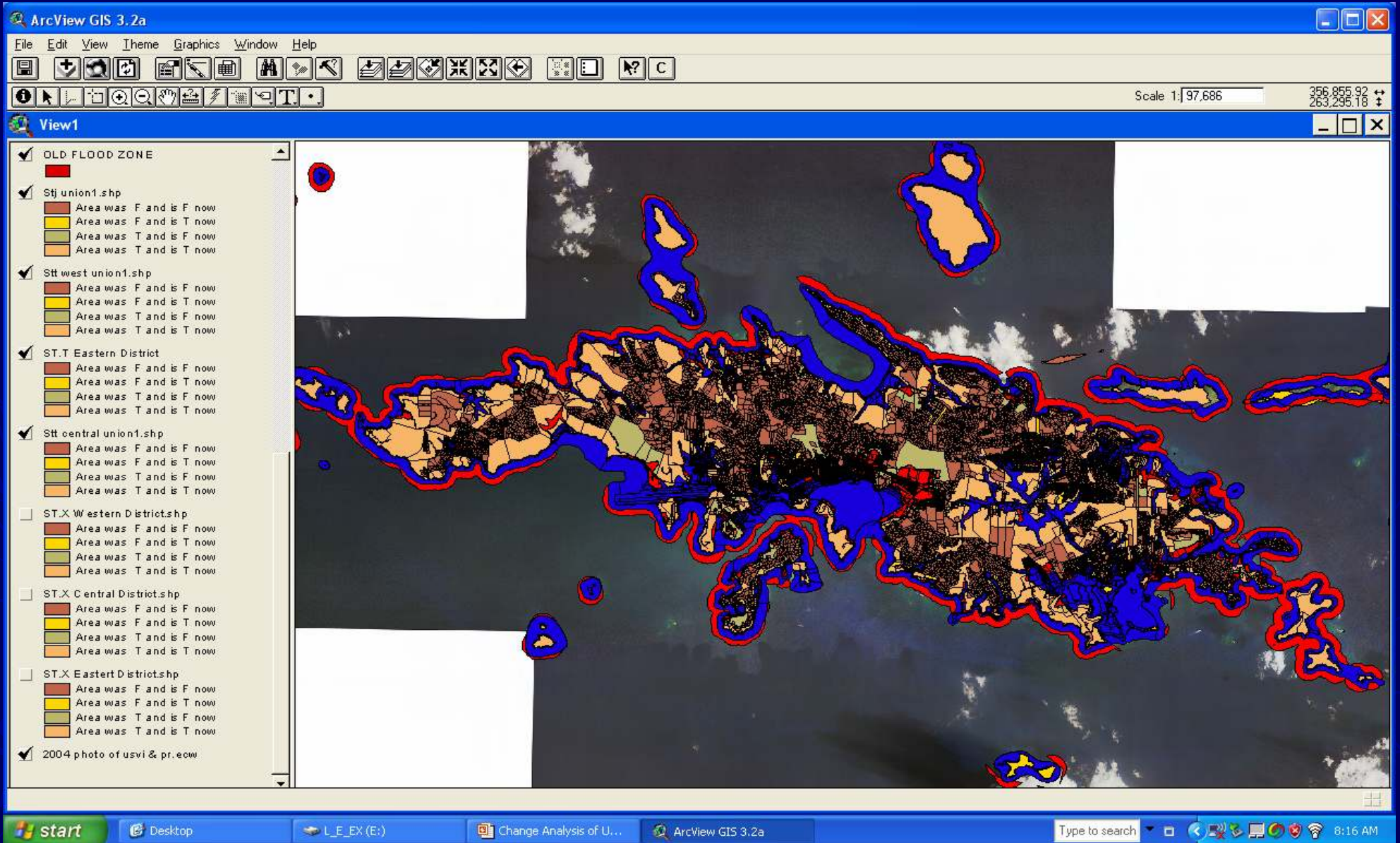


Results of Change Analysis.

- ▶ Once reviewers analyzed the result, it was clear that there was a significant reduction of the number of plots located in the Territory's Flood Plains.



U.S.V.I.



U.S.V.I.

Lots Per Area

58183

NEW MAPS

Total Lots in Flood

12442

Total Lots not in Flood

45741

OLD MAPS

Total Lots in Flood

17564

Total Lots not in Flood

40619

Total Lots Not in Flood and Remained Not in Flood

39435

Total Lots Not in Flood and are Now in Flood

1184

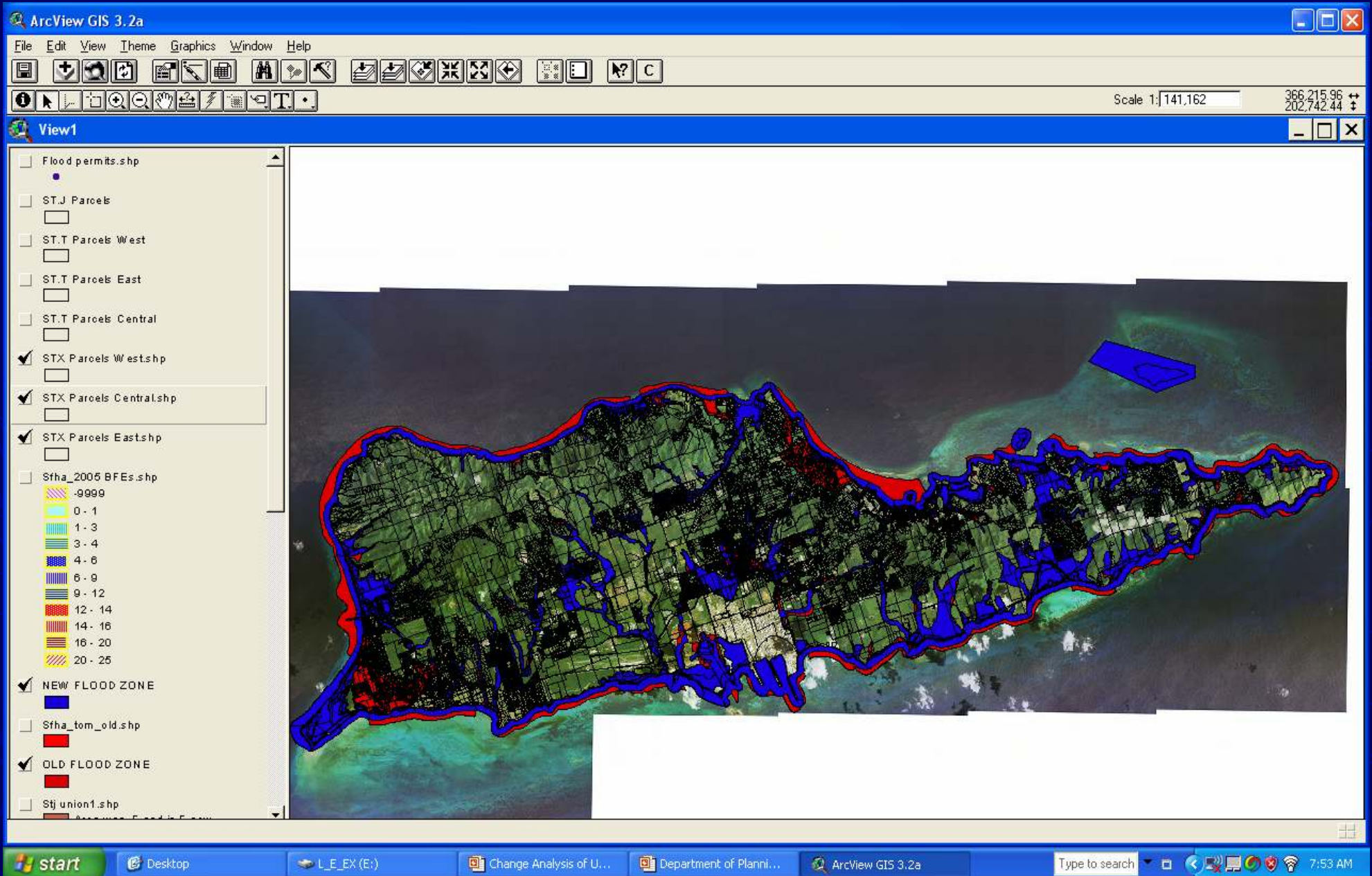
Total lots that were in flood and are now out of flood

6306

Total lots in Flood and remain in flood

11258

St.Croix District



St.Croix District

Lots Per Area

31719

NEW MAPS

Total Lots in Flood

6990

Total Lots not in Flood

24729

OLD MAPS

Total Lots in Flood

9761

Total Lots not in Flood

21958

Total Lots Not in Flood and Remained Not in Flood

21340

Total Lots Not in Flood and are Now in Flood

618

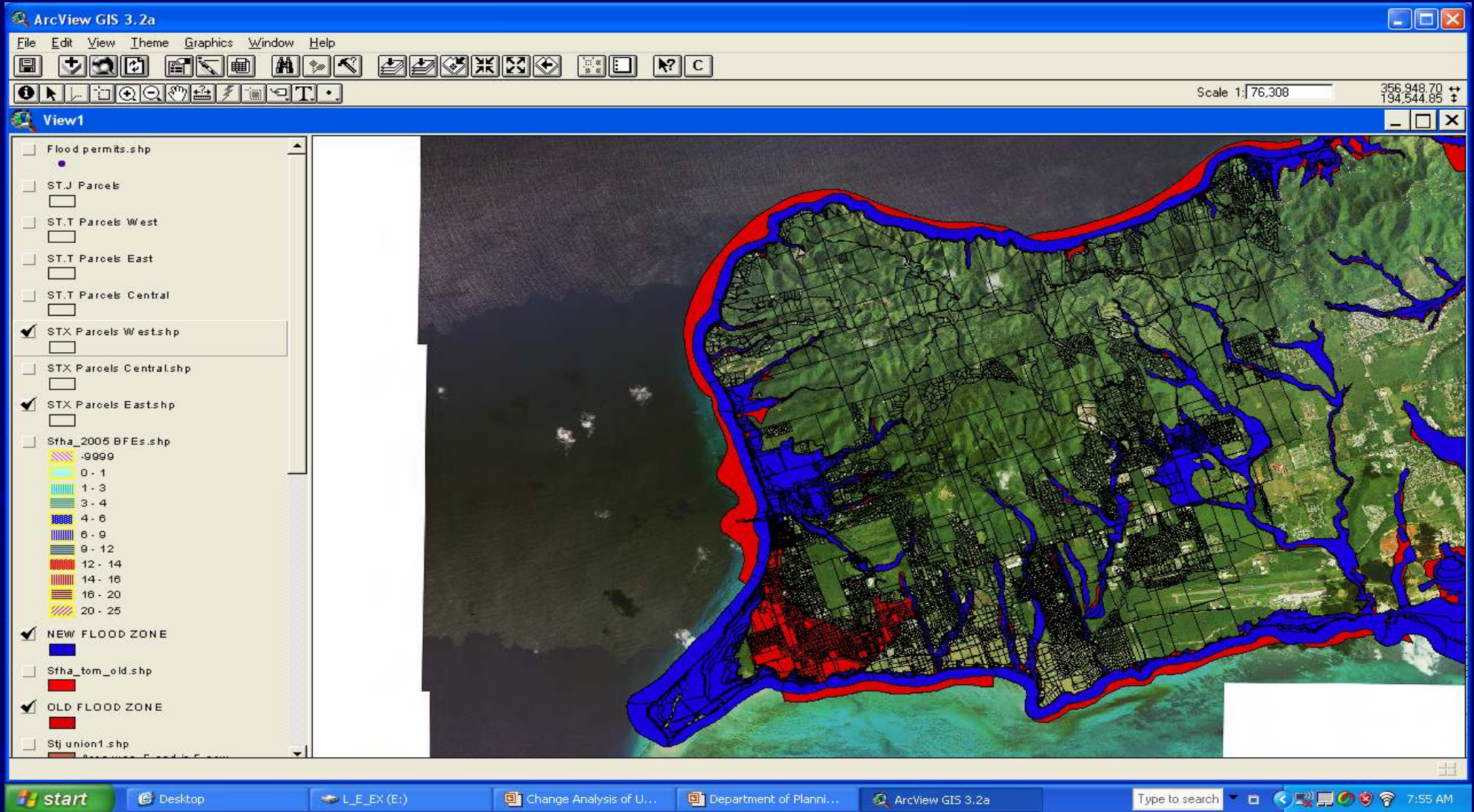
Total lots that were in flood and are now out of flood

3389

Total lots in Flood and remain in flood

6372

St.Croix Western District



St.Croix Western District

Lots Per Area

11811

NEW MAPS

Total Lots in Flood

2321

Total Lots not in Flood

9490

OLD MAPS

Total Lots in Flood

3873

Total Lots not in Flood

7938

Total Lots Not in Flood and Remained Not in Flood

7746

Total Lots Not in Flood and are Now in Flood

192

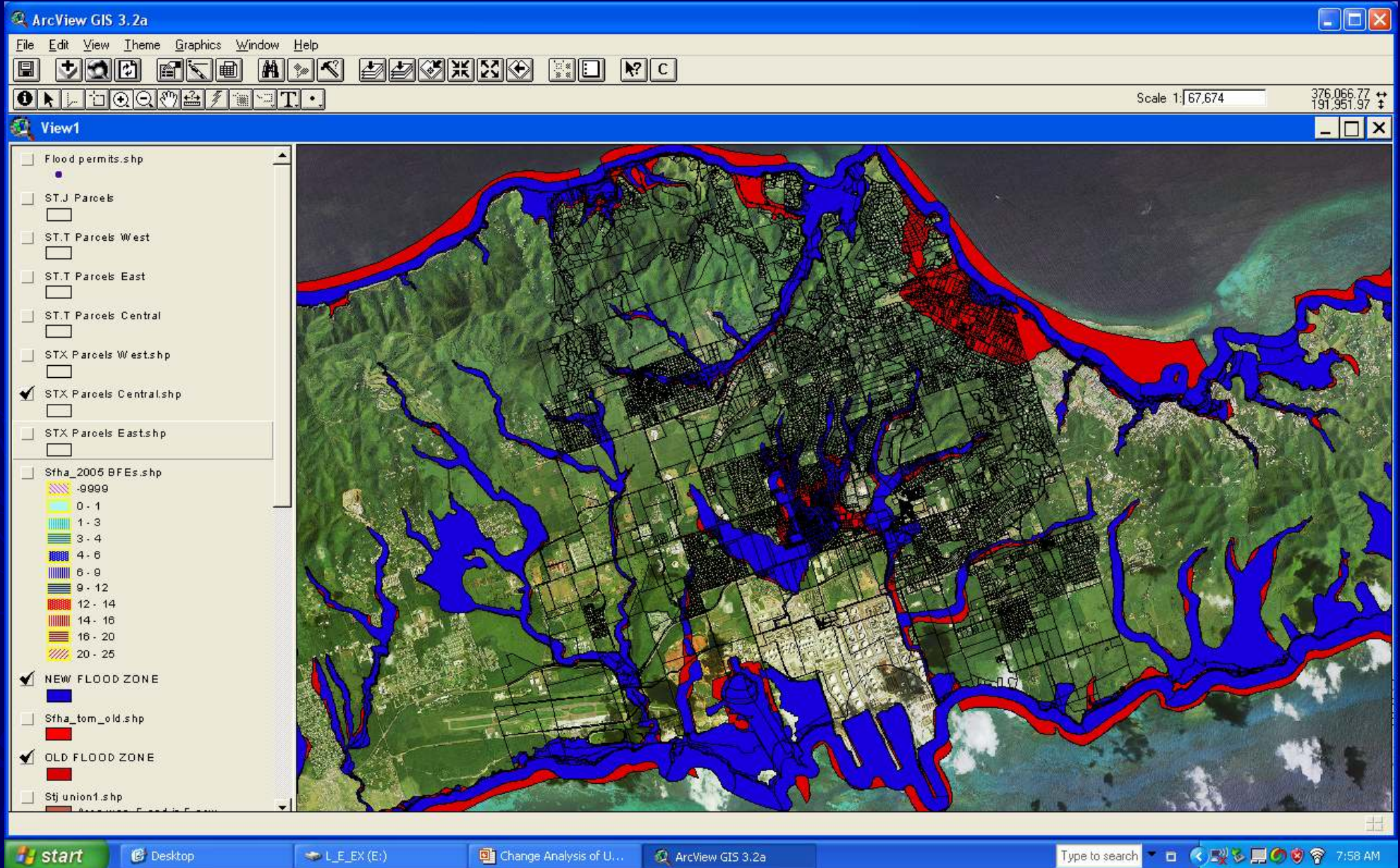
Total lots that were in flood and are now out of flood

1744

Total lots in Flood and remain in flood

2129

St.Croix Central District



St.Croix Central District

Lots Per Area

12173

NEW MAPS

Total Lots in Flood

2595

Total Lots not in Flood

9578

OLD MAPS

Total Lots in Flood

3696

Total Lots not in Flood

8477

Total Lots Not in Flood and Remained Not in Flood

8245

Total Lots Not in Flood and are Now in Flood

232

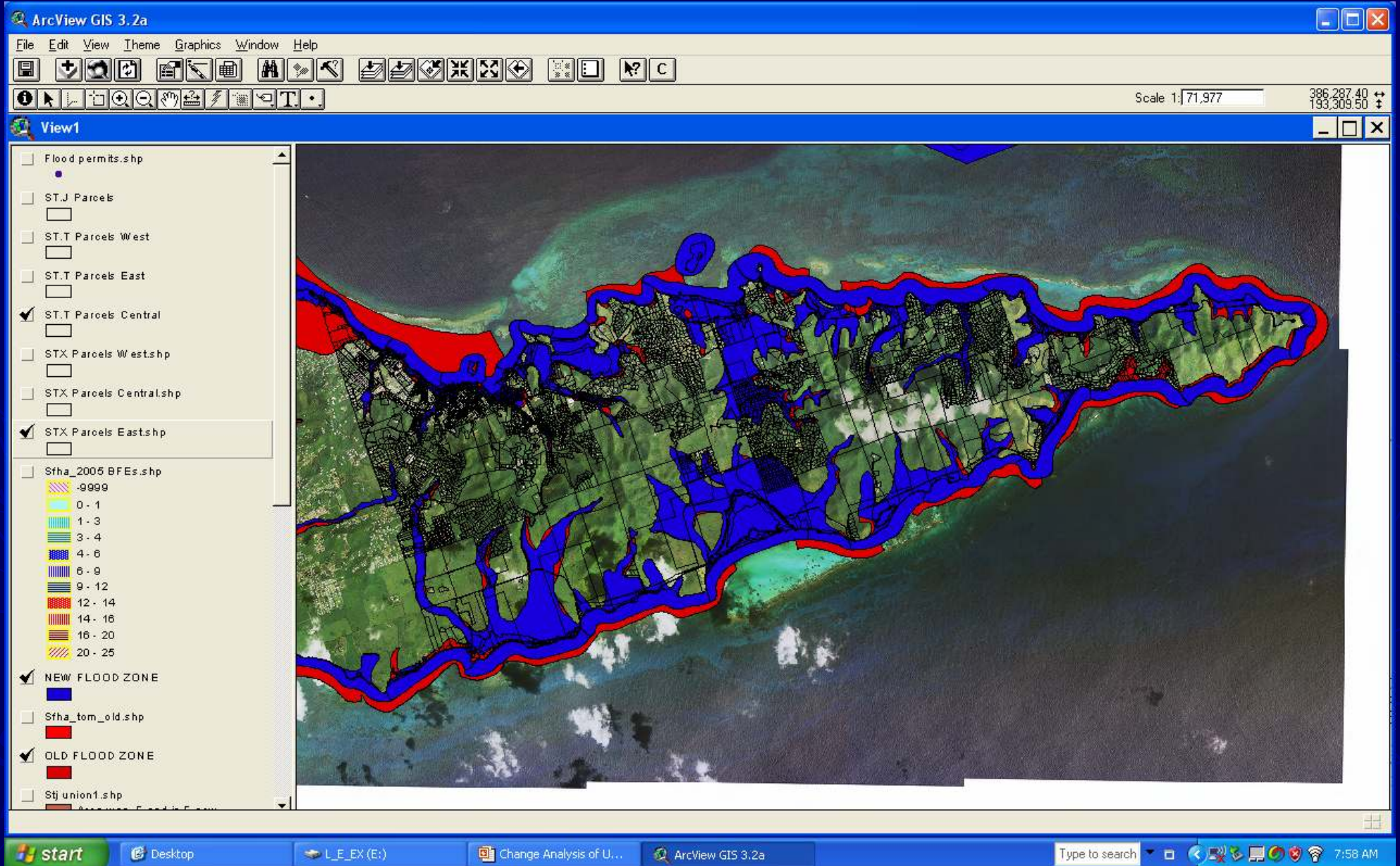
Total lots that were in flood and are now out of flood

1333

Total lots in Flood and remain in flood

2363

St.Croix Eastern District



St.Croix Eastern District

Lots Per Area

7735

NEW MAPS

Total Lots in Flood

2074

Total Lots not in Flood

5661

OLD MAPS

Total Lots in Flood

2192

Total Lots not in Flood

5543

Total Lots Not in Flood and Remained Not in Flood

5349

Total Lots Not in Flood and are Now in Flood

194

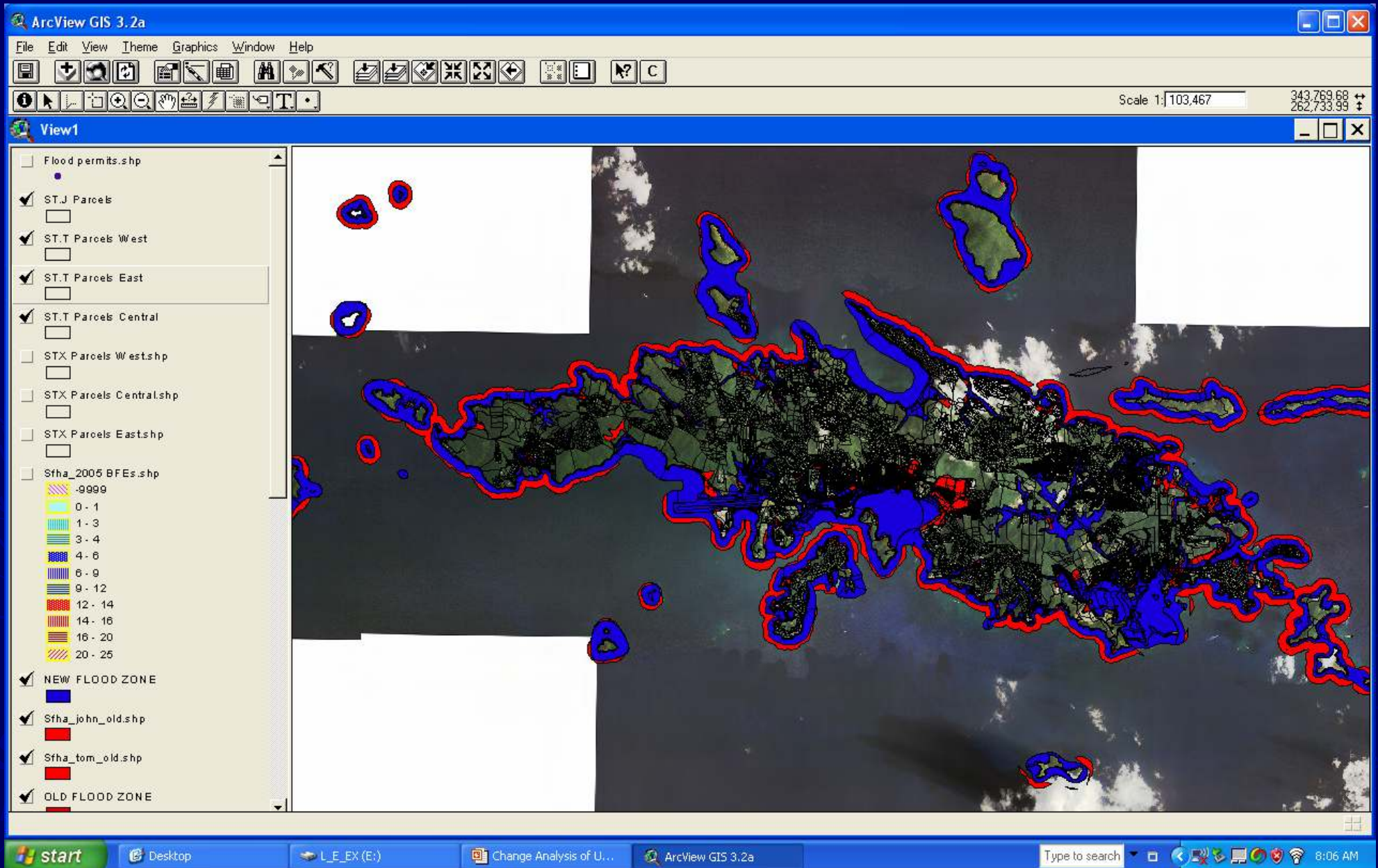
Total lots that were in flood and are now out of flood

312

Total lots in Flood and remain in flood

1880

St. Thomas District



St. Thomas District

Lots Per Area

22302

NEW MAPS

Total Lots in Flood

4585

Total Lots not in Flood

17717

OLD MAPS

Total Lots in Flood

6734

Total Lots not in Flood

15568

Total Lots Not in Flood and Remained Not in Flood

15135

Total Lots Not in Flood and are Now in Flood

433

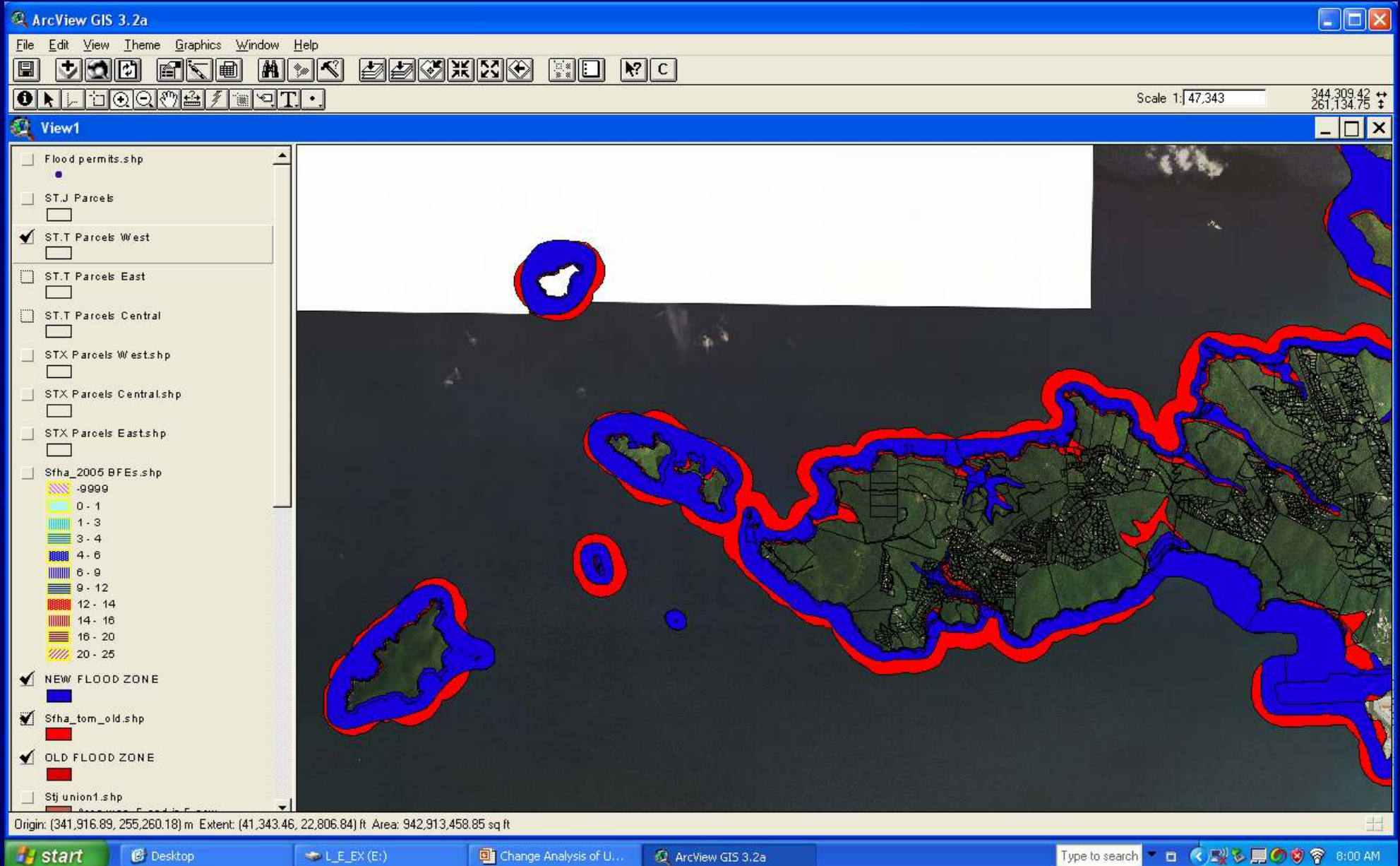
Total lots that were in flood and are now out of flood

2582

Total lots in Flood and remain in flood

4152

St. Thomas Western District



St. Thomas Western District

Lots Per Area

NEW MAPS

2078

Total Lots in Flood

275

Total Lots not in Flood

1803

OLD MAPS

Total Lots in Flood

303

Total Lots not in Flood

1775

Total Lots Not in Flood and Remained Not in Flood

1746

Total Lots Not in Flood and are Now in Flood
Total lots that were in flood and are now out of flood

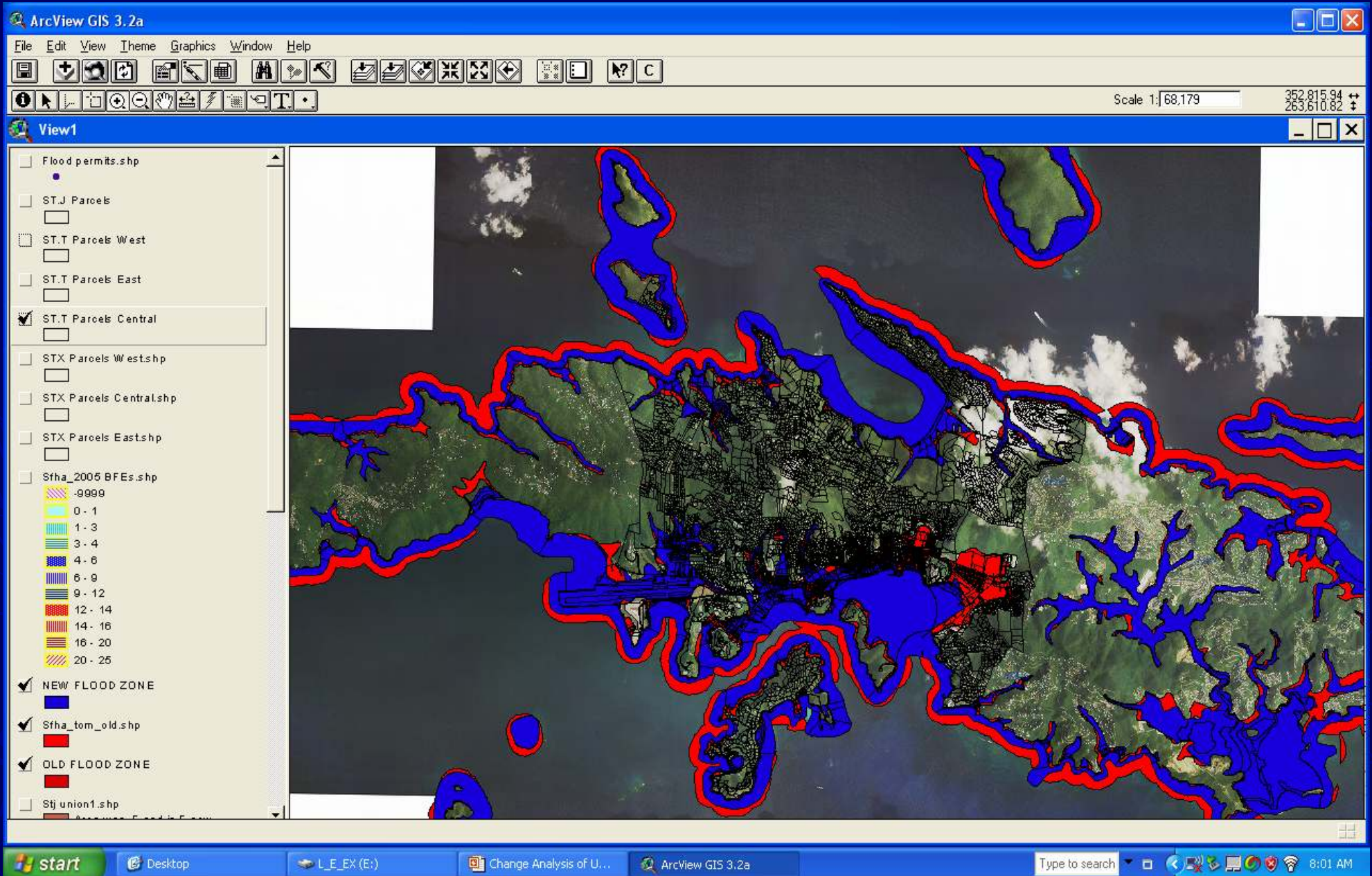
29

57

Total lots in Flood and remain in flood

246

St. Thomas Central District



St. Thomas Central District

Lots Per Area

NEW MAPS

Total Lots in Flood

11360

2155

Total Lots not in Flood

9205

OLD MAPS

Total Lots in Flood

3930

Total Lots not in Flood

7430

Total Lots Not in Flood and Remained Not in Flood

7284

Total Lots Not in Flood and are Now in Flood

146

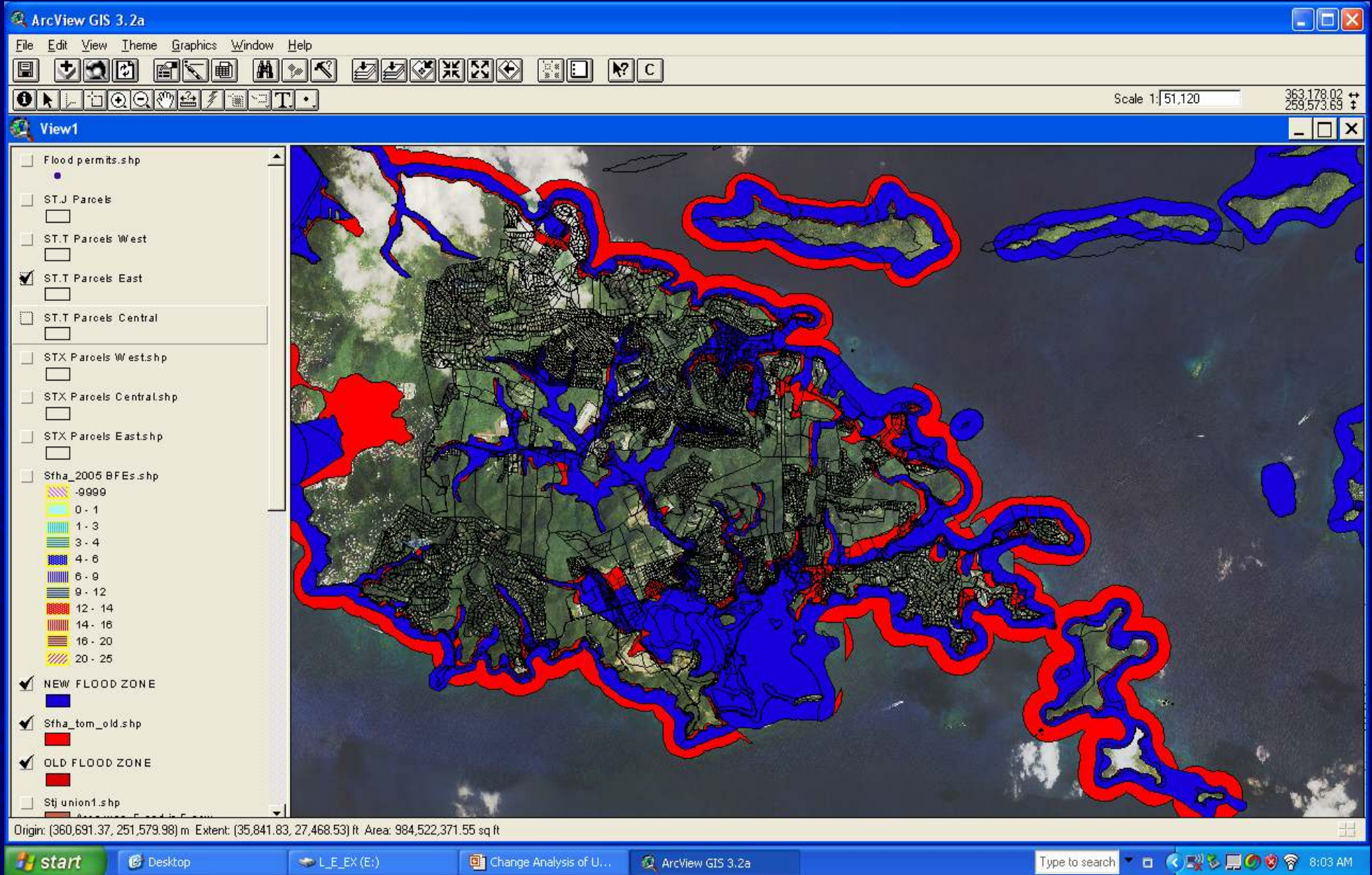
Total lots that were in flood and are now out of flood

1921

Total lots in Flood and remain in flood

2009

St. Thomas Eastern District



St. Thomas Eastern District

Lots Per Area

8864

NEW MAPS

Total Lots in Flood

2155

Total Lots not in Flood

6709

OLD MAPS

Total Lots in Flood

2501

Total Lots not in Flood

6363

Total Lots Not in Flood and Remained Not in Flood

6105

Total Lots Not in Flood and are Now in Flood
Total lots that were in flood and are now out of flood

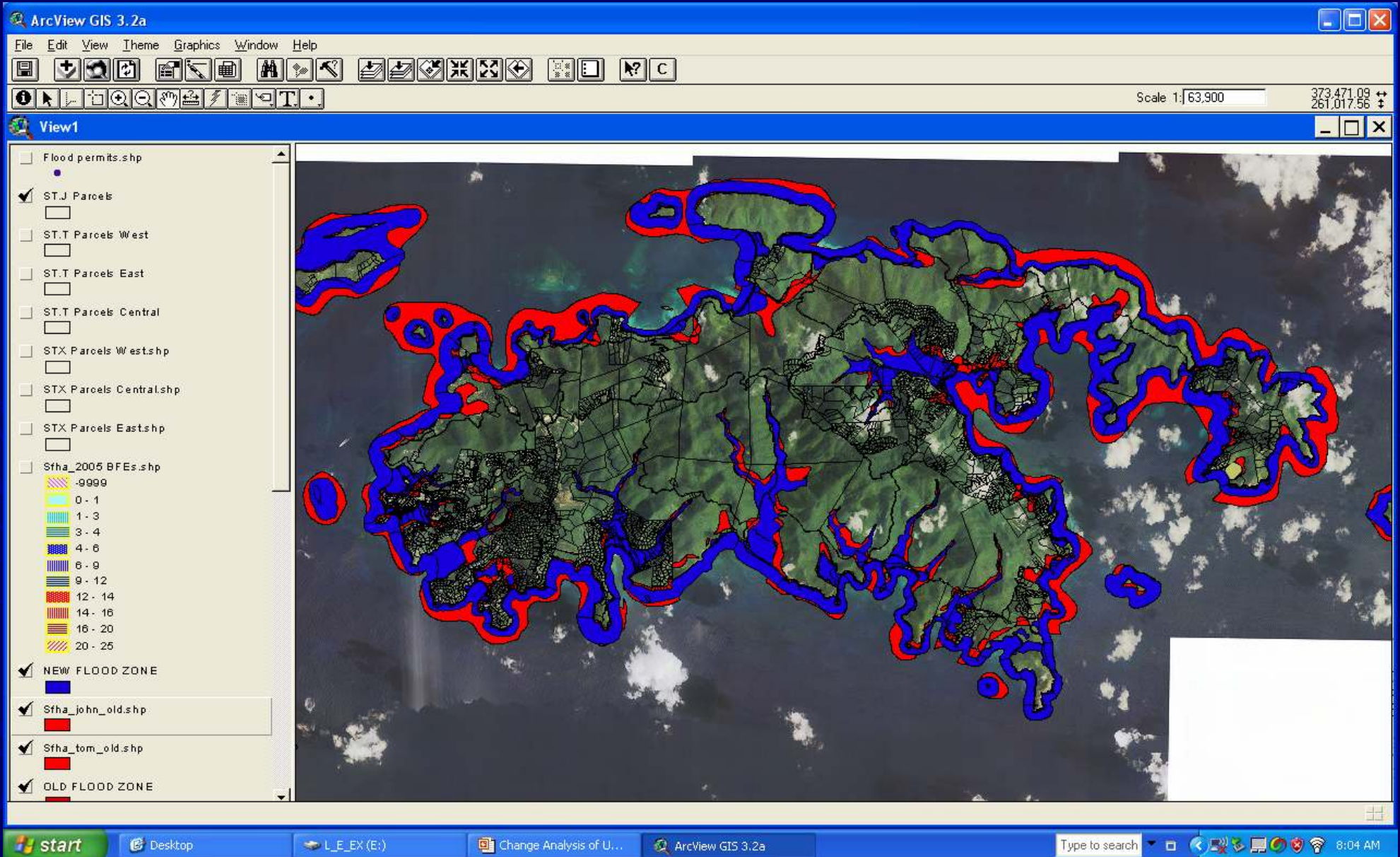
258

604

Total lots in Flood and remain in flood

1897

St. John District



St. John District

Lots Per Area

NEW MAPS

Total Lots in Flood	867
Total Lots not in Flood	3295

OLD MAPS

Total Lots in Flood	1069
Total Lots not in Flood	3093

Total Lots Not in Flood and Remained Not in Flood **2960**

Total Lots Not in Flood and are Now in Flood **133**

Total lots that were in flood and are now out of flood **335**

Total lots in Flood and remain in flood **734**

What does the results of Change Analysis this mean to Territory?

- ▶ New accurate and easy to read maps for better development planning and mitigation planning.
- ▶ Maps is GIS format for easier data analysis and cost effective map revisions and updating.
- ▶ Reduction in overall flood zone areas.
- ▶ Properly managed flood plain witch results Reduction in insurance.
- ▶ Reduction in overall flood loss and damage in the Territory.

Questions

