

PARCEL MAPPING IN FLORIDA

The Role of the Department of Revenue
In Achieving a Parcel Base Map of Florida

The development of a state wide digital base map for the state of Florida has been a process that has evolved over the last 17 years. In contrast to the base map development attempts in other states, Florida Dept. of Revenue has recognized the local mappers in each county as those best qualified to supervise the conversion of their property ownership maps from paper to computer. Rather than attempt a centralized statewide mapping project, we have developed a grant program that implements this recognition and provides matching funds to the counties for their own map development along the Cadastral Mapping Guidelines of Florida. This was as much an inherited strategy as it was intentional since by the time the Department had acquired digital mapping capability many of the counties of the state were well on their way into digital conversion projects. Orange, Alachua, Brevard, Lee, Monroe, Duval, Leon, Marion, Hillsborough, and Pinellas were among the 22 larger counties implementing projects well ahead of the Department of Revenue. This is an attempt to document the course of the Department of Revenues participation in digital mapping in Florida since 1989 and the evolution of a grant strategy that is working to produce a quality parcel ownership map for the entire State of Florida.

During 1989-90: The mapping section was involved in the preparation of folders for the in-depth study process. Aid and assistance was limited at best. There was no mechanism to evaluate the Property Appraisers' mapping programs. The aerial photography program was unable to meet the requirement of providing new aerials to counties on a three-year basis as state statute required.

In January of 1990, all funding for the mapping section was cut from DOR's budget. In July 1990, the funds were included in the department's budget and the mapping section was re-established and re-staffed (Supervisor & two Tax Specialist).

During 1991-92: Goals and Objectives were established and tasks were assigned. Procedures were written for all major functions of the mapping section. Procedures were developed for the review of all property appraisers' mapping programs including the evaluation of present and future aerial photography needs of the property appraisers. For the first time in many years, all scheduled counties were flown and new aerials were delivered. Approximately 22 counties were involved in the conversion from a manual mapping system to a digital/Geographic Information System (GIS). The Mapping Section published its first issue of the "County Mapping/GIS Data & Personnel Directory;" a complete listing of all 67 County Property Appraisers' Mapping and GIS programs throughout the state. It proved to be a very valuable resource to all requiring information about cadastral mapping and GIS within the state.

In 1992-93: Working through the Growth Management Data Network coordinating Council (GMDNCC), and with Department of Community Affairs and FEMA, we assisted in the assessment of property damage estimates in Dade County after Hurricane Andrew. It was accomplished by using true-color aerial photography that had been flown after the storm. The estimates were used to obtain a declaration for disaster assistance through FEMA. Mapping audits were conducted on thirty-six counties; reports were written and a copy was sent to the respective Property Appraiser. Also, in conjunction with the mapping

audits, the mapping staff also performed a review of 36 counties' Tax Collectors for compliance in the collection of Delinquent Tangible Property Taxes. A report was produced. As a result of these audits, it became apparent that many counties required upgrades to their existing maps.

The most effective way to improve the maps of the deficient counties was to use computers to update the maps and put them into a form that could be integrated to their CAMA systems to assist in their analysis of their tax roll equitability. A computer mapping system/GIS was purchased to help the mapping section provide greater assistance to the Property Appraisers and to bring us up-to-date in the mapping arena (approximately 43 of the 67 counties are currently using computerized mapping systems). Work was immediately begun to research the most effective ways of applying computerized mapping techniques to convert the smaller rural counties to computer mapping. As we learned GIS and discovered efficient methods for converting the counties, we aggressively implemented a program of aid & assistance to insure that the counties had access to our latest mapping methods. Budget limitations and the requirement to keep a mapping system beneath the radar of the Information Resource Council were factors that allowed the Department to develop and implement mapping strategies that could be successful in counties where the mapping resources were very limited. A mapping system was developed for less than \$25,000 that would be operated by staff in the mapping section that had not had the benefit of formal GIS education. The staff and their consultant chose to develop a system that could be operated and maintained by a staff that was much more map literate than computer literate. There were some projects underway in smaller rural counties that demonstrated the feasibility of digital conversion for the smaller counties with fewer resources than some of the larger counties. Gilchrist County, Okeechobee County, Levy County and Citrus County were among of the counties that had demonstrated the potential of a GIS system that could be implemented with a minimum of investment. Gilchrist County, Levy County and Okeechobee County demonstrated success in using hand held sub-meter GPS and existing aerial photography as a photo-base for parcel mapping. The use of the relatively inexpensive but accurate new generation of GPS lowered the cost of control from several thousands of dollars per point to between one and two hundred dollars per control point, bringing the means of establishing adequate photo control within the means of smaller rural counties. The use of aerial triangulation and the pugging of existing photography brought accurate GIS mapping within the reach of many new counties. After a period of initial investigation and over coming some of the best advice of many skeptics in the mapping community the Dept. determined that the use of an accurately controlled photo-base, the documents, and mapping expertise available in the county Property Appraisal offices employing coordinate geometry would produce a digital map of very satisfactory quality for the use of appraisers both in the county offices and by appraisers in the Department of Revenue. Citrus County had successfully tagged their tax roll to scans of their property ownership maps that were registered to existing control. These maps were valuable both in establishing market areas and neighborhoods throughout the county, in addition to defending a Value Adjustment Board Case over the values established in the largest subdivision of the county. The maps in Gilchrist County were used successfully by the Property Appraiser to automate the revaluation of all the timberlands of Gilchrist County. The Property Appraiser in Okeechobee County used his base map to inventory

and document the facilities of the electric and phone utilities of the county, both of which were discovered to be under reporting the value of their holdings in the county to the Property Appraiser. These discoveries are currently being used to defend the Property Appraisers findings against the utilities in the court system.

As these maps were produced and distributed the Water Management Districts discovered the value of accurate land ownership maps for their operations. The Suwannee River Water Management District was the first Water Management District to undertake to work with the Department and the counties of its district to help the counties build their digital property ownership maps. The District and the Department of Revenue, the Department of Environmental Protection and the USGS instituted a 3-year cooperative project with 12 of the 13 counties of the District to establish a ground control grid in each of the 13 counties of the District. The South Florida Water Management District greatly assisted the Okeechobee County mapping effort by making available all of their digital information from their work on the Kissimmee River Basin. When the County provided their parcel maps to the District, the District assisted the county once more by providing 1ft ortho-rectified grayscale photography covering 2/3 of the county.

The Department worked with the Base Mapping Advisory Committee (BMAC) and the Growth Management Data Network Coordinating Council (GMDNCC) on aerial photography users needs and, aerial photography and cadastral mapping standards development to eliminate duplication of effort in the procurement of aerial photography by various local, regional, state and federal agencies.

The Mapping section hired a GIS specialist to further our goal of providing assistance to the many counties involved in digital/GIS mapping and to advance our efforts toward improving our processes through technology. The Department became the lead agency in a joint-funding effort with seven other agencies (local, regional and State) to participate in the U S Geological Survey's (USGS) National Aerial Photography Program (NAPP).

The NAPP was a 50/50 cost share program through the USGS for the purpose of acquiring complete coverage, color infrared aerial photography for the State of Florida. From this photography, Digital Ortho-photography was produced. These orthos were used by federal, state, regional and local officials for mapping, the location of natural resources, site analysis and tax roll preparation. The initial savings to the state through this joint effort was more than \$2,000,000.00 with more realized as the program proceeded. The digital ortho-photos would provide a controlled photo base that would be available to every county in Florida.



The Mapping Section, working with the Florida Association of Cadastral Mappers (FACM) developed a mapping certification program that was adopted by the Department and the CFA/CFE designation committee. The designation was called the Certified Cadastralist of Florida (CCF), realizing that the fair and equitable administration of property tax requires a high level of competence in many areas. The CCF designation is designed for those professionals who are engaged in the use, production, and maintenance of cadastral maps. To achieve this designation, one must have worked in the field for two years, have successfully completed the IAAO course 600 - Fundamentals of Mapping and passed an eight-hour examination. In addition to the certification program, several four and eight hour cadastral mapping workshops were completed and presented to the Property Appraisers' staff at various locations around the state

By 1994-95: Forty-eight (48) of the sixty-seven (67) County Property Appraisers in Florida were involved in some type of computer-generated mapping. They varied in complexity from simple computer aided design (CAD) systems to very sophisticated Geographical Information Systems (GIS). Some were well-established systems; others were in the early stages of development. What they all shared was the need for a common statewide base map. Our efforts were directed toward that goal, through training, investigating funding sources, and proposing joint funding projects. An effort was undertaken to inventory the various counties of the state to estimate the effort required to bring all the counties of the state into compliance with a practical cadastral mapping standard and at the same time define a standard that would be practical to implement throughout Florida.

As we grew, we cooperated with the Dept. of Community Affairs GIS Lab to hold workshops where mappers from the counties could come and participate under the tutelage of the DOR mapping staff. DCA created a set of digital quad sheets which DOR mapping distributed to many of the counties on magnetic tape to aid their cadastral mapping. We continued working with several of the counties in Florida, demonstrating the integration of scanning, "coordinate-geometry," and image registration for successful and economic conversion of cadastral maps. Our experience with the use of computerized imagery for parcel mapping convinced us of the desirability of an accurate photo base for mapping throughout the state. We acquired tape reader-writers of various formats to adequately distribute data to the offices we were supporting throughout the state.

The Mapping Section began to prove the potential for GIS integration within the Department. While working with the graphic data of several of the counties, it became very apparent that the 12D8 data maintained by the Department was particularly valuable when linked to its geographical location on the planet. This also led to the realization that the 12D8 data could be zipped and provided to field staff. A demonstration was done in late October 1994 to show the Field Appraisal Supervisors and staff the utility of having maps and 12D8 data integrated on PC computers. As a result of that demonstration, a computer was ordered for the Maitland Office. We designed a pilot project to test the GIS

as an analytical tool in that office using data from Flagler County. We worked with several Property Appraisers and our field appraisal offices throughout the state to prove the utility of 12D8 parcel data in relational databases on desktop computers at the fingertips of field personnel. As a result of this research, the desirability of the 12D8 data and desktop computers with which to evaluate this data became obvious. The mapping section worked to identify funds to provide desktop computing for the Property Tax Administration process. Maps and data gathered from the Levy county Property Appraiser's office was used to build and plot maps showing sales activity in the Cedar Key area. The maps analyzed Cedar Key sales activity for previous four years. These maps were used by the Property Appraiser and the Department to counter what could only be described as a tax rebellion in Cedar Key.

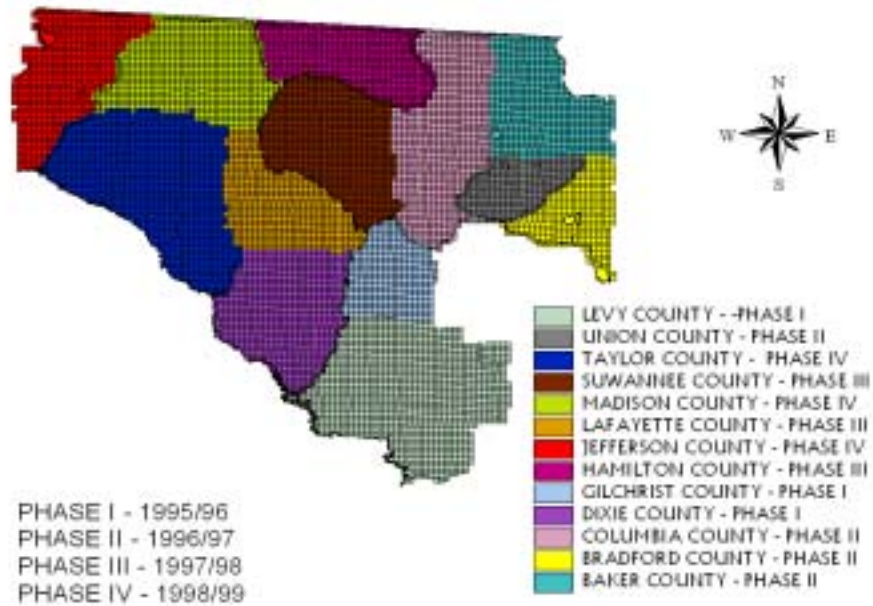
Suwannee, Columbia, Santa Rosa, Jefferson, and Flagler counties initiated GIS or automated mapping during the year. Citrus, Levy, Okeechobee, and Gilchrist counties continued projects with the advisement and assistance of the Mapping Section. Collier, Putnam, and Calhoun, counties indicated a desire to begin automated mapping in 1995.

The Department of Community Affairs requested we provide them with 12D8 data and state plane coordinates for the centroid of all parcels in the state. This information was used in their Emergency Management Program. The data was made available for processing within the first few weeks of 1995. The Mapping Section worked with the Information Resource Commission and the Growth Management Data Network Coordinating Council to develop a catalog and inventory of all available mapping resources within the state. We assured the availability of these resources to all Property Appraisers. We proposed a strategy to develop a digital cadastral map of the entire state to be drawn and maintained by Property Appraisers, since the Property Appraisers' offices are the most effective and productive source for creating and maintaining accurate and current digital maps of Florida for all users.

Discussion began on the feasibility of joint venturing with The Suwannee River Water Management District (SRWMD), the Department of Environmental Protection (DEP), and the Property Appraisers of their district to develop a district-wide cadastral base map. The Mapping section purchased a CD-ROM writer and is providing scanned digital products and data to counties and agencies in the state.

By 1995-96 Fifty-four (54) of the sixty-seven (67) County Property Appraisers in Florida were involved in some type of computer-generated mapping. The Department of Revenue (DOR), Department of Environmental Protection (DEP), the National Geodetic Survey (NGS), the Suwannee River Water Management District (SRWMD), and all of the counties within the SRWMD entered into a Joint Funding Project to densify the NGS's high precision control network. This was a 4year project to be completed in 1999 providing a six-mile grid of highly accurate control points for use in the development of base maps for GIS mapping in 14 of the 15 counties within the SRWMD (Alachua had an existing network in place).

SRWMD HORIZONTAL CONTROL NETWORK



As a follow-up to the above project, the Mapping Section met with all of the counties involved that had indicated a desire to begin the development of a GIS. We offered our assistance in that development and worked with 11 of the 14 counties.

Working with the Florida Association of Cadastral Mappers (FACM), we revised the Certified Cadastralist of Florida designation program to parallel the CFE designation program. It now requires the successful completion of four 30-hour courses (Math of the Cadastralist, Public Land Survey System, Real Property Interpretation and Map Compilation) conducted along with the IAAO schools. FACM was contracted to provide the coursework and instructors. We also developed training classes in "Interpretation of DOT Right-of Way maps" and "The Public Land Survey System (PLSS)" (the PLSS class is a mini version of the class offered by FACM). Both classes are directed toward the building of a base map for a GIS. The first offering of these classes was scheduled for utilizing materials from the FACM to offer several two-day workshops at various locations around the state.

In an effort to de-centralize the Mapping Section, one of our staff transferred to the Maitland office along with a GIS computer. He worked with the field appraisal staff on utilizing GIS as a tool for their daily operations improving the way we do business through the use of technology. An additional FTE was added to the Mapping Section, bringing the total to a supervisor and four staff members.

By 1996 Fifty-five (55) of the sixty-seven (67) County Property Appraisers in Florida were involved computer mapping. In order to improve on our aerial photography program and make it more customers driven (not one size fits all) we encouraged cooperative efforts with other agencies at the local, regional and state level to improve the end product. One effort implemented in was an agreement with FP&L their accurate 1ft. grayscales photography to the counties flown in 1996. This provided many counties

with an excellent base to use in the development of their cadastral mapping. Digital Ortho Quarter Quads (DOQQ) were also processed and made available to the counties upon request. We registered the DOQQs of several of the counties to the state plane coordinate system and demonstrated their utility by displaying vectorized property ownership maps overlaying the DOQQs. The DOQQs and the FP&L project helped identify the need for an accurate real world coordinate base in several of the counties that had created digital maps with inadequate real world control. The mapping section coordinated efforts in several of the counties to develop effective methods of bringing these maps to accepted cadastral mapping standards.

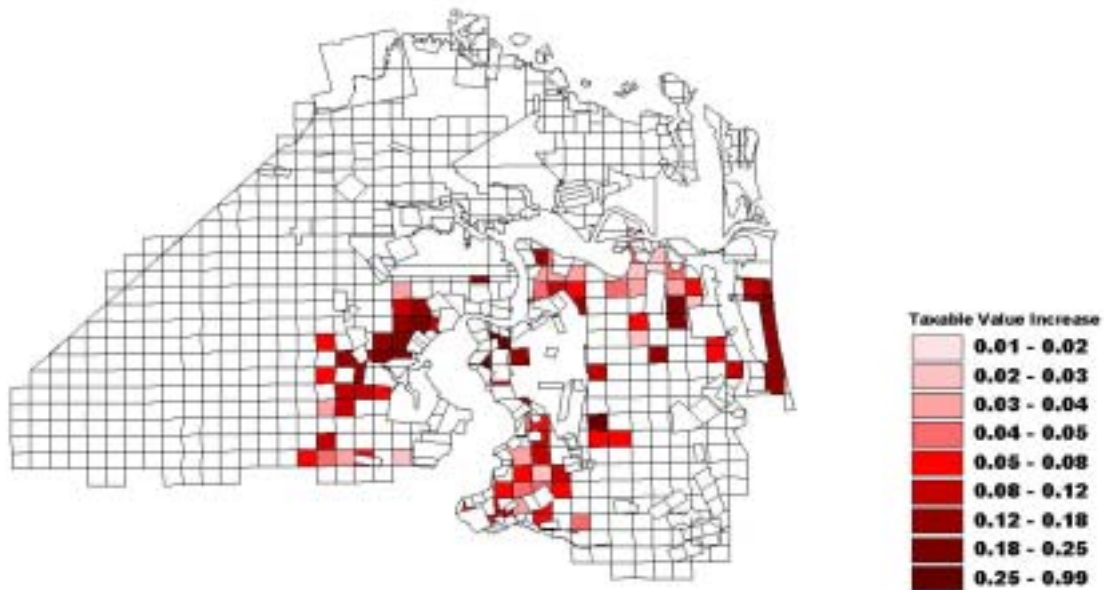


Over 200 gigabytes of DOQQ data was provided to several of the counties to aid them during the digital conversion process. The enormous size of the digital image files required computers with large storage capacity and processing speed. Processing time was decreased 75% when we acquired new hardware. Eight workshops were presented at various locations around the state. These were three-day workshops on PLSS, Reading & Understanding DOT R/W Maps and Interpretation of Real Property Descriptions (over 4,700 student hours).



Section **Parcel Analysis Model** or **SPAM** was developed in cooperation with the Department of Community Affairs - Emergency Management Division. The purpose of the project was to enable an efficient method of developing hurricane damage assessments. The current tax roll database is sorted and records are attached to the physical section they are located in. The path of destruction through a county is then plotted on the section grid and property value damages are derived from the database. The Emergency Management Division can provide FEMA (Federal Emergency Management) with a damage assessment in hours, which previously required weeks. The Property Tax Administration has utilized this data during a roll approval hearing with Duval County. The maps clearly demonstrated the County had been raising assessments

DUVAL CO. QUALIFIED SALE POPULATION 30 OR MORE SALES PER SECTION

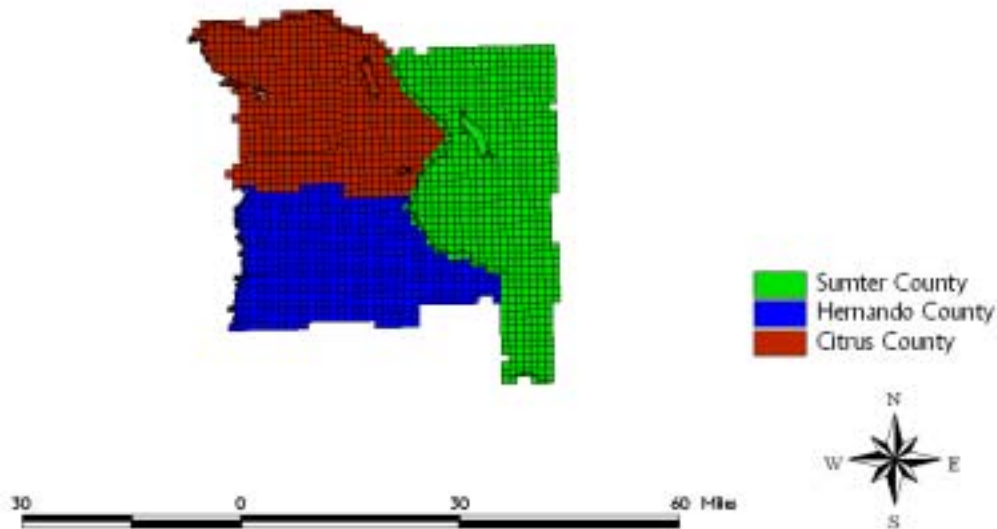


on sold properties primarily and the assessments on unsold properties were left unchanged.

The Florida Data Directory (FDD) was put on line in August of 1998. The web site (<http://als.dms.state.fl.us/~aerial/>) was a priority of the Geography Information Board (GIB). DOR was one of 13 State, local and other taxing authorities that came together to attempt the standardization of spatial data. The site's goal was become a clearinghouse for all geo-referenced data both spatial and non-spatial for all interested parties. The department maintained the Aerial Photography site on the FDD

A Joint funding agreement between DOR, DEP, Southwest Florida Water Management District (SWFWMD), Sumter County Public Works and the Property Appraisers in Citrus and Hernando Counties to densify the NGS's high precision control network in the three Counties. This project, when completed, will provide a six-mile grid of highly accurate control points tied to the PLSS to be used in the development of a base map for GIS mapping. This project was identical with the SRWMD project and coincided with that effort.

CITRUS, HERNANDO & SUMTER COUNTIES HORIZONTAL CONTROL NETWORK PROPOSED - FY 1998-99



On February 2, 1998, the Geographic Information Board (GIB) appointed DOR to form an Aerial subcommittee on large-scale photography. The major stakeholders that use aerial photography in Florida were on the committee. The committee developed minimum standards for large-scale photography that meet the needs of state, regional, county and local agencies. In April of 1998, monthly stakeholder workshops began. The guidelines were approved by GIAC on April 30, 1999 and by GIB on May 28, 1999. The mapping section worked with several of the counties to coordinate the allocation of assets to combine the creation of parcel mapping maps and E-911 maps for the counties.

As the FP&L parcel coverage of 37 counties became available, we began investigating the use of this data in several of the counties and proposed an agreement that would provide the data free to the counties in exchange for their maintenance and updates of the

maps. This effort produced an agreement between Putnam County and FP&L, which facilitated their GIS mapping program.

Mapping staff utilized PC Anywhere, which enabled users in different locations to view the screen of the other computer. This ability enabled mapping and software problems to be corrected from Tallahassee decreasing travel expenditures as well as providing our customers immediate service. Three staff members won a Team Work Award for this cost savings idea.

1998 saw the commencement of **Phase II** of the SRWMD Joint Funding Project. The Department signed a Memorandum of Understanding (MOU) with the SRWMD to assist the Counties within the District to convert their manual maps to a digital/GIS. SRWMD provided \$50,000.00 toward this project. We approached several counties with a proposal to contract out their conversion and act as contract manager. DOR provided 50% of the cost, and the county along with the monies from the District made-up the balance. MOUs were signed with Hamilton, Jefferson, Lafayette, Levy, Madison, Gilchrist, and Suwannee Counties. Working with the HARNs densification network from the previous SRWMD project, we were able to begin building an accurate base-map in these counties. Madison, Lafayette, and Gilchrist were completed. The remainder were continued as multi-year projects. As part of the MOU, the counties are required to provide the Department with a digital copy of their base-maps on an annual basis. We also signed MOUs with Lake, Flagler, and Pinellas counties for digital conversion and survey control to improve accuracy and to ensure that they meet the Department's Cadastral Mapping Guidelines. These were 50/50 cost share, with DOR paying 50% and the county paying 50% of the total cost of the project.

The process of re-writing the Mapping Guidelines had been ongoing for several years. The lack of progress was mainly due to the inability to obtain consensus on the issues from the many stakeholders. The new technologies in mapping brought about many issues. Mapping strategies varied from county to county and software-to-software. However, in January 1998, we approached the Geographic Information Board (GIB) with a request for assistance in creating statewide Guidelines. Working with the GIB and the Geographic Information Advisory Council (GIAC) and with the monies they had budgeted for Standards development, we initiated a plan for the development of the guidelines within the calendar year. The first meeting of the steering committee was held on February 17, 1998 and consisted of members of PTA's Mapping staff, the Hon. D. Ray Harrison, Jr. Gilchrist County Property Appraiser; Keith Gay, GIAC member representing the Florida Association of Cadastral Mappers and Tom Taylor, Florida Conflict Resolution Consortium (CRC). This meeting started the process of Guideline development.

The following is a calendar of events that followed:

March 12, 1998	Mailed out Stakeholders Survey Questionnaire The 18 responses received were compiled
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| April 24, 1998 | Mailed out meeting notices and materials for 1 st workshop
Approx. 209 stakeholders were identified and mailed to. |
| May 6 & 7, 1998 | 1 st Stakeholders Workshop was held in Orlando, 37 attendees
Tom Taylor facilitated the meeting. (CRC).

Developed 1 st Draft of Mapping Guidelines utilizing
Existing material and input from the first workshop. |
| June 29, 1998 | Mailed out 1st Draft of Mapping Guidelines to approx. 209
stakeholders (including all Property Appraisers, GIB and GIAC
members) |
| July 15, 1998 | 2 nd Stakeholders Workshop was held in Orlando
26 attendees
Tom Taylor, CRC, facilitated the meeting. |
| July 29, 1998 | Mailed out Final Draft of Mapping Guidelines requesting
comments (Approx. 209)
Total responses - 9 (3 received after Aug. 14 Deadline) |
| October 15, 1998 | Delivered to GIAC for their review
Adopted with two minor changes (Section 5.6.5 and 15.0) |
| November 6, 1998 | Delivered to GIB for review
Adopted as presented! |
| May 28, 1999 | Adopted by DOR and Mailed to all Property Appraisers and
interested parties. |

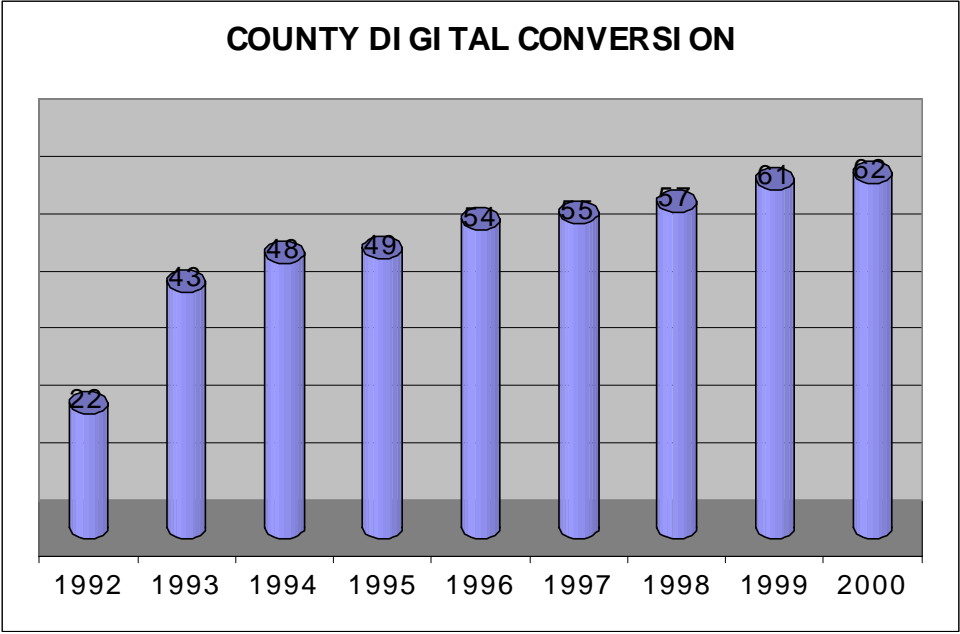
An additional FTE was added to the Mapping Section, bringing the total to a supervisor and 5 mappers.

By 1999: Sixty-two (62) of the sixty-seven (67) County Property Appraisers in Florida were engaged in computer mapping.
The Mapping/GIS Section developed and announced its "Digital Map Conversion Grant Program" to ensure the successful development of a standardized and accurate large-scale statewide base-map. This was a cost share program, with the counties providing 50% and the Department providing 50% of funding toward the cost of digital conversion of the County Property Appraisers' cadastral maps. It was designed to provide assistance to a county for the initial conversion from a manual mapping system to a digital one and/or to upgrade their existing digital maps in order to meet the minimum requirement set forth in the Department's "Cadastral Mapping Guidelines. This included acquisition of survey control; digital ortho-photography, planimetrics or other data needed to ensure the requirements were met. It could not be used to purchase hardware or software. The total dollar amount of a grant to any County could not exceed \$35,000.00 in a fiscal year

(July1- June30). Applications were submitted no later than C.O.B. on April 15th for consideration in fiscal year beginning July 1. Due to budgetary constraints, the review and approval of grant applications was on a "first come, first serve" basis with preference given to counties doing initial conversion, multi-agency cooperative efforts, and those demonstrating the greatest need. Grading criteria was developed for the application review process. All applicants were notified of their approval or denial no later than May 31. Contracting for the conversion and/or for the acquisition of data was the responsibility of the County Property Appraiser, terms of which were subject to review and approval by the Department. The first year of the grant program was to 9 counties for a total of \$213,00. To qualify to receive funds under this program, the County must complete and submitted an application and meet the following criteria:

1. The County Property Appraiser was committed to the digital conversion of his/her mapping system. This commitment included providing the proper staffing to endure a successful conversion and continual maintenance of the system.
2. The County agreed that all digital mapping was developed in accordance with the Department's "Cadastral Mapping Guidelines. Including the development of the parcel centroid numbering system utilizing state plane coordinate values as prescribed in the Guidelines.
3. The County agreed to provide to the Department annually a current copy of their digital cadastral map (including the parcel centroid data) in a transfer format and on a medium agreeable to both parties. The delivery the data would correspond to the delivery of the preliminary Tax Roll. The Department agreed that the Property Appraiser is the custodian of the parcel map data and that the data will only be furnished pursuant to Chapter 119, F.S.
4. A Memorandum of Understanding (MOU) was executed between the County Property Appraiser and the Department.

The grant program has been increased from a limit of \$35,000 per county project per year to \$75,000 per county project per year. In 2002 we provided \$970,000 in grant dollars to the counties. Over the course of the entire program from 1998 thru 2003 the total amount of dollars granted has been \$1,973,237.33



We have developed a mapping website for our appraisers to access all parcels submitted from the counties in the state. The site provides the appraisers with specialized query tools to locate their subject parcels and find comparables for their studies. Each parcel includes the DR 590 attribute information submitted by the counties for every property on their tax roll. Aerial photos are available for many of the parcels to give our appraisers an opportunity to become very familiar with their study subjects before they ever leave their desks.

The New Century was a turning point. We sought to continue grant, training, and aid & assistance programs for map development.

One of our software vendors, InFoCAD, was folding, Arc/InFo began an initiative that was repairing many of the short-comings that had forced us to InFoCAD in the beginning. By building on the foundation established in Arc View ESRI began developing a software that preserved the functionality of their workstation product and incorporated a point and click interface that made it accessible to the non-technical user and the professional alike. As ESRI included tools to aid in the integration of multiple data types and projections it became more and more apparent that a mapping tool was being developed that could help achieve the full potential that GIS held for the property mapping and appraisal community. To take advantage of the promise of the technology the Dept. hired a full time programmer to develop GIS based applications that would realize the full potential that GIS held for appraising the growing volume of parcels and the increasing requirement for more sophisticated analysis to keep up with the ever growing demands of the real-estate market and our users for more and better property appraisal in Florida. The Mapping Section developed a prototype web site to develop and demonstrate the functionality available through GIS mapping to our department. The success of the prototype located off site encouraged us to begin the development of an on site web application that will effectively serve the needs of our field staff throughout the state. Our programmer has devoted himself to developing an application that will meet our needs. Our map audit procedures were expanded to insure that the maps developed with the grant program were meeting the Cadastral Mapping Guidelines and to identify areas in the state where maps can be brought up to the standards of the Cadastral Mapping Guidelines. The parcel maps of 62 counties are now being submitted to the Department and we are cooperating with a federal program to evaluate the use of the Statewide Parcel Map in Federal Applications such as disaster relief and homeland security. Today all counties but two in the entire state have digital maps. Plans are underway to complete the 2 remaining counties, while maps throughout the state are being reviewed and upgraded.

Our present and future challenge is multifaceted. The completion of digital conversion and the development of productive applications to improve the accuracy and equitability of the tax roll in the several counties remains a priority for the mapping section. We are continuing to interact with the appraisal staff in PTA to develop improved strategies for integrating digital maps and computerized appraisal methods into an integrated application that will effectively manage our mission of insuring the accurate and equitable assessment of properties in Florida. We are developing GIS appraisal training curricula to educate ourselves and our appraisers to create an application that will use our maps and GIS technology to bring as much useful information to the appraisal process as possible. We continue to participate with the many agencies of government federal, state, and local to coordinate and facilitate the gathering and compilation of data that will support appraisal activities throughout the state. As new requirements and even new enemies challenge what

we do, we will continue to strive to produce for our state and nation a product that that will serve both well.