

## Case: The Negative Effects of Weak Data Management – The Cape Coral Florida Experience

**Introduction** - The City of Cape Coral Florida is unique by any standards. It was founded approximately forty years ago by two land speculators. The Rosen brothers, who bordered by the Gulf of Mexico on one side and the Caloosahatchee River on the other, sold the land to people all over the world. They were correct. The land they purchased, with 400 miles of canals, is now populated by approximately 150,000 people and growing cities in the United States.

Rapid growth provides challenges as City officials struggle with organizational structure, infrastructure, community interests, economic planning, and other community issues. A major issue is maintaining City-owned reliable water, wastewater, and reuse (irrigation) systems. These utilities must be responsive to consumers, protect the environment, and ensure that the community remains self-sufficient. This study highlights financial and data problems faced by City officials as they struggle with utility expansion.

In 1991 the City realized that its computer system would be the key to solving the problems already identified with information processing, data collection and integration or technology. A proposal was approved to replace the WANG VS100 with an IBM AS400 and a fully integrated database provided by Harward Technical Enterprises (HTE). The Wang VS100 utilized a flat file database that required COBOL programmers to customize reports for management. It was adequate throughout the early history of Cape Coral, but not sufficient for maintaining data in a growing city with a proactive strategic plan. The AS400 and the HTE software were chosen in 1992, but the implementation process extended into 1994.

This author was hired as the City's first Business Manager in January 1994. At that time, although conversion processes were underway, the utility module was not converted from the WANG system to the HTE system. The Business Manager assumed responsibility for conversion to the new computer system.

The data conversion process highlighted problems in the City's management system. It was apparent at an early stage that HTE was an outstanding software package that would improve the City in the area of data storage, management, and security. However, HTE's system proves only as good as the data provided by the City and information stored in the previous WANG system. Therefore, the first element of conversion became an analysis of data and processes. Through this effort, several major areas of concern developed.

An initial analysis of the existing system revealed data and process problems in assessments, billing, exemptions, impact fees, forecasting, stormwater collections, water meters, collections, utility expansion and betterment fees. All are possible future case studies, but this research concentrates on a problem discovered in the billing of betterment fees, sometimes called Contribution in Aid of Construction (CIAC). The combination of missing data and poor management processes resulted in a system that cost the taxpayers millions of dollars in lost revenues and issues continued well into the next decade.

This case has far reaching implications for public administration. The main issue is management processes and the ability of government to reinvent while facing political pressure. Additionally, this case speaks directly to local government's ability to build in processes that expose problems in the management system. The City of Cape Coral built in measurement tools that would prevent fraud, waste and abuse. However, as the case indicates, the system was abandoned when political pressure became too great.

**What are Betterment Fee's?** - Utility expansion has been an ongoing series of projects in Cape Coral since the early 1990's and is planned to continue for years. Assessments are charged to property owners to pay for this expansion. With the City adding water, sewer, and irrigation utilities to thousands of homeowners originally on wells and septic tanks, this assessment process has evolved into one of the largest and most controversial utility expansion programs in the country.

The City of Cape Coral utilizes betterment fees, when utilities are necessary outside of an assessment area. Property owners are charged fees on a per square foot basis for hooking into the water, sewer, and/or irrigation system. With the City continuously engaged in utility expansion, betterment fees are extremely important to property development.

When a home or business connects to a telephone, electric, or cable utility for the first time, the owner does not have to pay an assessment, betterment or any fee. Usually, a small deposit is required and the owner is allowed to connect. The utility pays for the infrastructure. However, when a home or

Figure 1 – Map of Florida



business connects to a newly provided *City owned* utility, property owners are billed a pro rata share of the cost of the infrastructure. In this case, the property owner is required, by law, to pay through an assessment or betterment fee.

Betterment fees are defined as contributions in aid of construction (CIAC) designed to defray cost of the existing water distribution and wastewater collection systems currently providing service to properties or lots not yet developed or improved. The cost of such betterment fees charged to each individual lot is varied, depending upon the point in time at which such facilities were installed and the costs of said installation. City of Cape Coral Ordinance 19-38 (1996)<sup>1</sup> stated "It is further declared that said contributions in aid of construction will be periodically examined in order to provide uniform charge to users of water, irrigation water, and wastewater services according to current costs whether or not the users connect to the service which is currently constructed or connect to the system through a process of expansion on an assessment basis".

This case study addresses problems associated with the collection of betterment fees due to data and management process problems. Conversion of the utility module in the existing computer system was complicated by the state of critical paper records and limited electronic data in the WANG system. As stated earlier, the first step was analysis of the existing system. The analysis began by reviewing the processes for data collection and entry. It was quickly established that formal control of data was decentralized to a point that responsibility and accountability suffered greatly.

**The Initial Water Betterment Issue** - Analysis of data began with a review of accounts and flowcharting of processes conducted by the Business Manager in early 1994. This process identified the initial betterment fee problem. A review of accounts revealed a list of 64 properties owing betterment fees and 37 properties owing impact fees for a water installation project in the Palmetto Pines area of Cape Coral. An interesting part of this discovery was the fact that the list was discovered in a desk drawer located in the customer service department. This became an early indicator of management challenges discovered throughout the process of computer conversion.

Investigation revealed the betterment area was established by City Council in 1991 and a list was created for billing. Each affected owner was required to pay a betterment fee ranging from \$960 to \$1,440 depending on the size of their property. Additionally, an impact fee of \$493 was charged. Many property owners paid immediately. However, City Council allowed citizens to voluntarily elect City financing for one or both fees. Financed betterment fees totaled \$61,920 with \$47,752 remaining after the initial deposit was collected. Financed impact fees totaled \$18,931 with \$15,033 remaining after the initial deposit.

The problem, as explained by department personnel, was that support for a billing system was never afforded to the utilities customer service office leaving them with no means of invoicing property owners. At the time of this action, Utilities Customer Service reported to the Utilities Department, billing responsibilities belonged to the City Clerk, and the City's information system belonged to the General Services Department. The accounts were not billed in 1991.

In 1993, the betterment list was discovered by a customer service supervisor. Again, support was sought through the chain of command to invoice the responsible property owners. At this time, liens were placed on each identified property by the City Clerk, but no billing system was established. These accounts were not billed in 1993. The list remained in a file drawer until discovered by the data analysis process established in early 1994. Discovery of this list moved betterment fee analysis higher on the priority list and lead to a bigger issue.

It is important to note that most of this lost revenue was recovered once billed in 1994. A billing account was established and letters issued to each property owner explaining that utility bills were due. Except for a few properties that changed owners; citizens paid. It appeared they were just waiting on the City to bill them and it didn't seem to matter that the invoice was three years late.

**City Response to Data Issue** - In early 1995, in an effort to centralize revenue collection and improve data integrity, the City created the Office of Business Management and Information (OBMI), combining revenue collection with the computer division under the supervision of the Business Manager. The Business Manager position was converted to Director of OBMI reporting directly to the City Manager. This author became the first, and only, Director of OBMI. The department was dismantled in early 1997.

OBMI was established to be the centralized point for research, analysis, quality measurement and strategic planning. The department worked in conjunction with the finance department to utilize new, state of the art information systems to improve processes and analyze data. The vision for OBMI was to create a tool for management to standardize consistency and ensure accountability. This new department was tasked with consolidating processes, integrating data, and ensuring the City collected revenues.

OBMI began the process of institutionalizing data integrity and reporting procedures valuable to management's ability to make key decisions. Areas such as possible privatization efforts, future revenue initiatives, automation efforts, and business concerns concentrated in this office. Additionally, all utility related revenues were analyzed and monitored by OBMI. Key issues were policy and procedures, accountability, reporting procedures, data integrity, strategic planning, and the management of information systems.

As the computer conversion progressed, each data element was examined for process, reliability, and accuracy. It became painfully apparent very early that the previous system of paper and a limited flat file WANG computer system were inadequate. Virtually every source of data examined contained major flaws detrimental to the financial health of the City. Missing or inadequate data created challenges. Additionally, the City was in the middle of a \$250 million assessment and successful implementation of the HTE system was critical.

The process was further compounded by the fact that the WANG system stored a small amount of data. Therefore, conversion to HTE only accounted for the limited information stored in the WANG computer. Historical data was extremely hard to obtain and lacked credibility. Additionally, the Geographic Information System (GIS) purchased by the City was initially populated with the current City base map. This was a huge issue as the base map was being changed daily and the City was not changing the GIS.

Property changes were completed by Lee County and sent to Cape Coral on paper. Lee County utilized a good management system for joining and dividing property. However, once the action was accomplished, the changes were sent weekly to Cape Coral for inclusion in their GIS database. There was no computerized process in place for the data to be entered into the GIS. The paper system utilized was months behind. Therefore, each week data maintained by the City of Cape Coral in the GIS and HTE computer systems were deteriorating.

As a result, daily transactions in the real estate community were administratively deficient. The problem causing the most concern was Lee County's practice of splitting strap numbers without City knowledge. Strap numbers are a series of numbers and letters that identify each parcel of land in Lee County. This data affected virtually every module in the data bases; especially liens placed on property by the City.

**Conversion to the H.T.E. Computer software - Emergence of the Data Problem** - During the first 16 months in existence, OBMI concentrated on process improvement and system analysis. This analysis revealed key indicators of revenue accounts in need of major review. As stated earlier, the system selected by the City was an excellent software program with the capability of becoming a major management tool. Existing processes, data, and training necessary to utilize the new HTE system correctly were inadequate. This made the conversion process difficult and every analysis completed brought more data problems.

Several major developments during the initial analysis indicated that a total audit of City data was necessary. The following are just a few of the major revenue problems discovered during the analysis: 1) water accounts were approximately 10,000 less than reported over the past several years, 2) wastewater accounts were approximately 6,000 less, 3) delinquent accounts were written off annually with little attempt to collect, 4) lot mowing carried over \$1.2 million in delinquent accounts with no action taken, 5) assessment foreclosures were presented to the contract attorney for collection without proper research, resulting in the City spending approximately \$10,000 in unnecessary attorney fees, 6) strap changes were not recorded in our assessment program with necessary regularity resulting in several problems and double assessments, 7) delays in moving assessments, lot mowing, stormwater, betterment, and impact fee accounts to HTE created major address problems resulting in lost revenue and poor customer service, 8) there were inadequate processes for financing impact and betterment fees resulting in approximately \$47,752 in betterment and \$15,033 in impact fees not being billed from 1991, 9) An additional \$2.3 million in betterment fees associated with line extensions were not billed, 10) there were virtually no policy or procedure manuals, and 11) daily account problems revealed by customers, and many other issues. This list is not inclusive as many other issues existed.

OBMI's analysis indicated that several major management concerns should be addressed through an audit. These included: 1) account integrity, 2) policy and procedures manuals based on the approved City ordinances, 3) future Planned Development Process (PDP) responses must include revenue collection, 4) management process improvement, and 5) reporting procedures. Additionally, departmental managers should be held accountable for data.

Continued research brought several more issues pointing toward the need for an audit of City accounts and data. First, management processes were not adequate to allow thousands of daily transactions

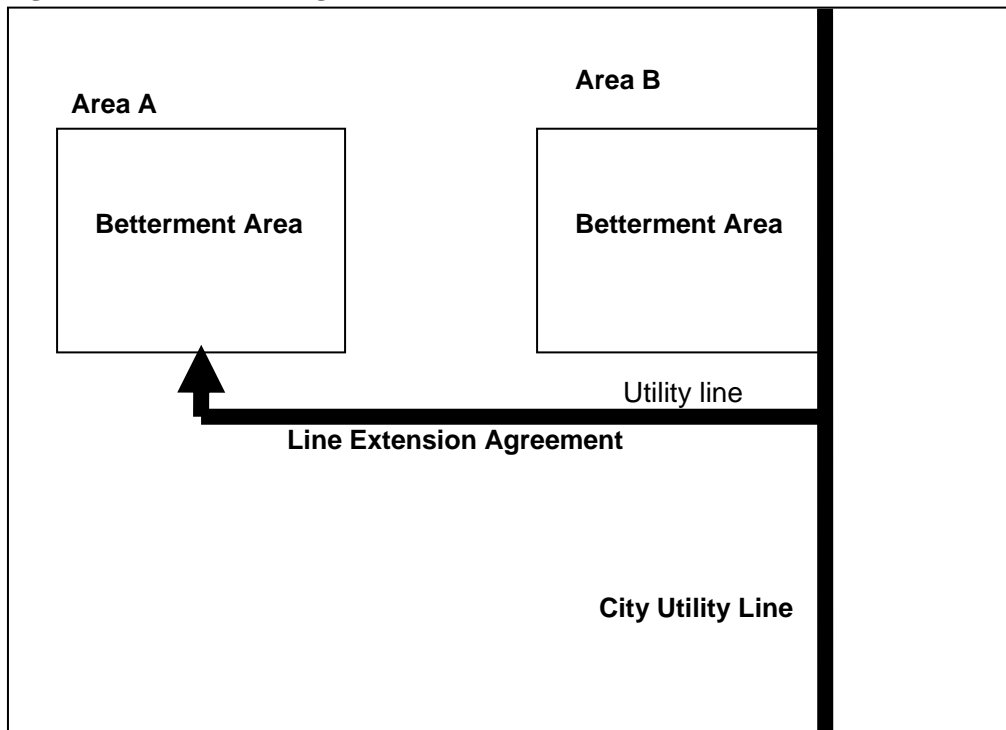
and information to flow smoothly through the system. Second, City management systems required flowcharting to determine choke points that allowed existing conditions. As each management process was analyzed, major issues were recorded and noted for correction. The flowcharting process revealed poor data trails and inadequate information. In fact, the betterment fee issue came to light through the flowcharting process and proved to be the most expensive issue facing the City. A third major area was the PDP process. Strengthening the PDP process to include information systems and the revenue stream was vital to data integrity.

**The Line Extension and Betterment Issue** - The City of Cape Coral utilizes a *line extension* agreement when developers request to connect to utility services but are not located on an existing service line. The agreement outlines responsibilities for the owner and the City. In most cases, the developer pays to connect to the service and then terms of the agreement provides for the developer to be reimbursed as property along the extended line are attached. Reimbursement occurs when the affected property is developed and could take several years. Some existing line extensions dated as far back as 10 years.

The \$2.3 million plus problem discovered by OBMI indicated betterment fees were not charged for property included in existing line extension agreements. Line extension and betterment are distinct and separate actions. Both must be applied in each situation. However, in this betterment issue, developers paid to extend utility lines to their property and were reimbursed when homeowners connected to their line. They were not charged a betterment fee for the improved property. Therefore, a developer connecting directly to the City line paid a betterment fee, while a developer connecting to the same system through a line extension only paid for the extension and was reimbursed for the line they installed. The betterment fee was ignored for those requiring line extensions.

Figure 2 demonstrates how the line extension and betterment ordinance should work in unison to protect City interests. Unfortunately, through poor management processes, properties falling into area A were excluded from betterment fees.

**Figure 2 – Line Extension Agreement**



The betterment issue was discovered in early 1995 and the controversy continues today. The 1996 list was compiled during OBMI’s research and contained 24 properties owing approximately \$716,160 for water, \$1,203,955 for wastewater, and \$386,727 for irrigation. This list combined for approximately \$2,306,842 in

betterment fees that should have been billed and collected by the City.<sup>2</sup> Many of the same properties from the 1996 list are included on the 2004 list.<sup>3</sup>

Based on guidance from the City Attorney, the decision was made that the statute of limitations was still in effect and the City should create accounts and submit bills to affected property owners. This was accomplished in 1996 in the form of letters to property owners and developers. The letters created a huge controversy and, in some cases, legal action. It is important to understand that the developers of the affected property did not know about the charges and City processes neglected to inform them at the time of development.

Establishing betterment accounts began a process of legal action, debate at council meetings, and citizens forming political alliances on both sides. Unfortunately, elected officials compounded the problem by refusing to directly address the issue. Due to political pressure from both sides, the issue remained in debate for a continued period. City Council agreed to bill the affected properties, but failed to take action when payment was not received.

A few properties on the 1996 betterment list paid immediately upon receiving the bill. However, most stretched the process through the legal or political system. The list of properties requiring betterment fees continued to grow over time as properties were developed. In a memo to the City Manager from the Finance Director,<sup>3</sup> of \$4,972,319 owed to the City in betterment fees only \$1,443,121 was collected. Several of the properties on the 1996 list were still listed. In some cases, the City explanation stated that the fees were deferred until the time that development occurred, even though the property was developed.

One deferred property, the subject of a newspaper article on May 21, 1996 citing that City Council voted 6 – 2 for the development to pay \$188,000 over a five year period.<sup>4</sup> That property is still listed on the 2004 memorandum as deferred. As analysis continued, it became obvious that management processes and electronic data must be completely evaluated and revised if conversion to the new computer system were to be successful. To this end, OBMI created the accounts reconciliation project to conduct an audit of City data and accounts.

**Conclusion** - When this author left the City of Cape Coral and OBMI in early 1997, the accounts reconciliation project had completed the analysis and implemented changes. The result was new processes for betterment fees, improved data collection procedures, and correction of the PDP process. Additionally, the philosophy of City staff improved dramatically in regards to data control and responsibility.

Osborne and Gaebler defined steps necessary to solve this massive processes problem in their best selling 1992 book, *Reinventing Government*.<sup>5</sup> The City of Cape Coral studied this philosophy and OBMI established a process that focused on results rather than procedures.

It is important to note that the analysis conducted by OBMI produced numerous problems and opinions among staff, council members, activists, and citizens. Political alliances formed that criticized the process and disputed findings. As noted earlier, OBMI was disbanded in 1997 with several unresolved questions in the areas of assessments, betterment, impact fees, and revenues.

Despite hours of public debate and input from concerned citizens, this betterment issue has continued for approximately 10 years. The 2004 Betterment list was substantial and contained some properties listed on the 1996 list. The issue is still controversial and efforts to address it are ignored or minimized.

In 1997, several activists requested an audit from the State of Florida due to discrepancies in computer data, assessments, utility expansion, and betterment fees. The 1996 betterment list was one of the key elements of evidence. However, the State of Florida auditing committee ruled it was a local issue and refused to subject the City to an audit.

In 2005, through efforts of State Representative Jeff Kottkamp, an audit was approved and conducted. In accordance with Auditor General report number 2006-182:<sup>6</sup>

The scope of this audit included transactions during the period October 1, 2000 through March 31, 2005, and selected transactions taken prior and subsequent thereto, related to allegations concerning the City's water, sewer, and stormwater operations to determine whether such transactions were executed, both in manner and substance, in accordance with governing provisions of laws, ordinances, bond covenants, and other guidelines.<sup>6</sup>

The audit produced 24 findings with recommendations for the City. Of those, four findings deal directly with CIAC or Betterment fees. These findings as printed in the audit are as follows:

- **Finding No. 10:** The City’s methodology for determining contributions in aid of construction (CIAC) fees may not appropriately match fees charged to actual costs incurred and, as a result, may be suspect to challenge by property owners.
- **Finding No. 11:** The City does not have adequate controls in place to ensure that CIAC fees are timely collected.
- **Finding No. 12:** City Council approved, via vote of City Council members rather than enactment of an ordinance, a change in CIAC fees established by ordinance, contrary to Section 166.041, Florida Statutes. Further, City staff’s actions regarding CIAC and capital expansion fees charged regarding the North Loop CIAC project may have been contrary to City Council’s intentions.
- **Finding No. 13:** Capital expansion fees and CIAC fees were not always expended in accordance with the City’s Code of Ordinances and applicable case law.<sup>6</sup>

Despite the emphasis placed on the 1996 list of uncollected betterment fees, the audit did not address this issue. However, several processes corrected during the tenure of the OBMI Director (1994 to 1997) seemed to resurface. The processes include treatment of developments and controls for timely collection.

According to the Auditor General’s office, the audit will be revisited in the future for corrective action. However, unless legal action is taken, there is no emphasis on the City to follow the State of Florida’s recommendations. In fact, the City disputes most of the findings of the audit.

In their quarterly update to the citizens of Cape Coral, the City noted that “The Auditor General has completed its review of the City’s utilities program and found no significant problems.” It’s noted that the audit found 24 findings, but the City respectfully disagrees with the results. It is their contention that the City follows an accepted municipal philosophy and that the State disagrees with the City’s approach. Additionally, the City feels they are addressing many of the recommendations already.<sup>7</sup>

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#### **Questions**

**Question # 1 – After reading this case, what processes would you build into the accounts reconciliation project if you were the Director of OBMI?**

**Question # 2 – Who would you put on the team to correct this problem? What would be your expected results?**

**Question # 3 - What were the problems with information gathering processes and what would you suggest to improve the process?**

**Question # 4 – After reading this case, what processes would you implement if you were the Director of this department and responsible for the City’s data?**

**Question # 5 - What procedures should be implemented to preclude the account problems faced by the City of Cape Coral?**

**Question # 6 – This case is about more than management issues. What are the political implications faced by the City of Cape Coral? Why was this problem so hard to correct?**