# St. Johns River Water Management District

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***Abstract:*** *This real world case targets the fields of marketing and sustainable business practices. The case's strategic decision involves changing consumers' attitudes in order to reduce water consumption in the District.*

## INTRODUCTION

In December 2000, Malissa Dillon, Regional Communications Coordinator for Florida's St. Johns River Water Management District (SJRWMD), was reviewing information that her office had recently collected. The report concluded that a large segment of the District's population was not very knowledgeable about water supply issues and water conservation techniques. Malissa was alarmed about these results given that SJRWMD's assessment of its water supply indicated that the existing water supply sources would not be able to meet the water needs of 40 percent of the District in the next 20 years. Malissa knew her supervisor, Linda Burnette, director of the Office of Communications and Government Affairs, was anxious to hear her ideas on how to educate the District's residents about the magnitude of the problem and to persuade them to conserve water.

## BACKGROUND

Florida had five water management districts to protect and manage ground and surface-water resources. In Northeast and East Central Florida, those key sources included the St. Johns River and the Floridian aquifer system. The St. Johns River Water Management District included all or portions of 19 counties in Northeast and East-Central Florida, an area that included several areas with high residential populations and the state's largest city, Jacksonville.

### St. Johns River Water Management District's Mission and Functions

SJRWMD had several core missions, one of which dealt with its water supply. Specifically, this mission focused on implementing a regional strategy to provide sufficient water for users and the environment. Two of the major functions that SJRWMD performed, which supported its water supply mission, were to issue permits to users of large amounts of water and to develop long-term water supply plans for the District. All large water users in the St. Johns District including agriculture, manufacturers, recreational entities, and public and private water supply utilities were required to apply for a permit before they could draw from the District's water supply. The District granted permits if the applicant met permitting criteria, including an evaluation of the environmental impacts on spring flows, lakes, and/or wetlands, and the possibility of saltwater intrusion.

### State Requirements

In 1997, the State passed legislation that required each of the Water Management Districts to develop water supply plans to meet the needs of the District in 20-year increments. The Districts

based these long-range plans on each District's assessment of its current water supply sources. If the results of the assessment indicated that any areas within the District would not meet the future water supply needs from current sources, then the District's plan was required to include ways to meet the water supply needs through different options.

## SJRWMD's MARKETING & COMMUNICATIONS

### Primary Target Markets

Malissa's role at SJRWMD was to provide effective communications about water use reduction and conservation to both the suppliers and users of water within the District, with the two primary target markets being school-age children and adults. Malissa said that she found her job both rewarding and challenging given the District's population growth patterns. She stated, "Florida is one of the fastest growing states in the U.S. with the St. Johns District average population increase over the past decade at over 14%. Analysts expected this trend to continue with a 50% increase in the District's population by 2020." (See Exhibits 1 and 2 for detailed population and water use projections.) She added, "Many of these new residents will have no idea of Florida's water resource issues. This means that my Department has to continuously educate new residents about Florida's unique water supply and water resource problems."

**Exhibit 1: Population for 1995 and 2020, by County, St. Johns River Water Management District**

| County | 1995 St. Johns Population | 2020 St. Johns Population | % Change in Population |
|---|---|---|---|
| Alachua | 154,644 | 220,272 | 42 |
| Baker | 19,261 | 27,265 | 42 |
| Bradford | 1,217 | 1,530 | 26 |
| Brevard | 444,992 | 653,800 | 47 |
| Clay | 120,896 | 196,800 | 63 |
| Duval | 718,355 | 940,700 | 31 |
| Flagler | 36,997 | 84,700 | 129 |
| Indian River | 100,261 | 154,100 | 54 |
| Lake | 175,162 | 294,129 | 68 |
| Marion | 175,197 | 289,770 | 65 |
| Nassau | 49,127 | 78,800 | 60 |
| Okeechobee | 616 | 964 | 56 |
| Orange | 569,222 | 886,968 | 56 |
| Osceola | 395 | 763 | 93 |
| Polk | 8,863 | 12,300 | 39 |
| Putnam | 69,516 | 87,500 | 26 |
| Seminole | 324,130 | 514,800 | 59 |
| St. Johns | 98,188 | 176,700 | 80 |
| Volusia | 402,970 | 574,400 | 43 |
| **Total** | 3,470,009 | 5,196,261 | 50 |

*Source: District Water Supply Assessment 1998, www.sjrwmd.com*

**Exhibit 2: Total Public and Domestic Water Use for 1995 and 2020, St. Johns River Water Management District** *

| County | 1995 Actual Use total (mgd**) | 2020 Demand Projections (mgd) |
|---|---|---|
| Alachua | 22.72 | 34.58 |
| Baker | 2.16 | 3.58 |
| Bradford | 0.12 | 0.16 |
| Brevard | 57.33 | 87.41 |
| Clay | 14.81 | 27.15 |
| Duval | 106.90 | 148.76 |
| Flagler | 5.59 | 16.41 |
| Indian River | 14.86 | 31.14 |
| Lake | 28.65 | 51.17 |
| Marion | 23.74 | 39.89 |
| Nassau | 6.97 | 13.30 |
| Okeechobee | 0.06 | 0.11 |
| Orange | 109.06 | 74.65 |
| Osceola | 0.04 | .08 |
| Polk | 0.89 | 1.30 |
| Putnam | 8.44 | 11.02 |
| Seminole | 52.61 | 91.19 |
| St. Johns | 14.66 | 22.52 |
| Volusia | 57.56 | 76.76 |
| Total | 527.17 | 831.18 |

*Agricultural and industrial use not included.

**millions of gallons per day

*Source: District Water Supply Assessment 1998, www.sjrwmd.com*

New residents to Florida brought with them their experiences and expectations that Florida obtained its drinking water through the same surface water sources (i.e., lakes and rivers) as most other states. However, most of Florida's drinking water came from underground aquifers, which were much less expensive to obtain compared to surface water sources. Potable surface water was approximately three times as expensive to get as ground water from aquifers. Malissa stated, "New residents look around, see all of the lakes and rivers, and do not think there is a water resource problem. They also see that their neighbors are watering their lawn four times a week, so they do the same. Unfortunately they do not know that their neighbor moved in only two months ago and shares the same misconceptions about Florida's water supply as they do."

**Marketing Efforts within the District**

SJRWMD's marketing and communications strategy previously had utilized various unpaid methods of promoting water conservation in the form of public service announcements and news stories in newspapers, and on radio and television programs. Malissa stated that in the past her department operated on a minimal budget, which covered the expenses for a small staff and a limited amount of printing for brochures and educational material. She explained, "Basically, we did not have the resources to pay for television, radio or newspaper advertisements. Our strategy

was to develop television commercials in-house, which were of a very basic quality, and send them to television stations in our District hoping they would run them as public service announcements. The results were sporadic with some stations choosing to run our commercial but showing it in the middle of the night when the station had open air time." Malissa continued by stating, "The same went for print advertisements. We would contact newspapers and pitch stories concerning water supply issues or water conservation tips hoping to get some free publicity. We would have to wait and see if the newspapers picked the story up or not."

In addition, Malissa's department employed a variety of other methods including in-school education programs, presentations, and seminars to various groups such as the Garden Club or the Kiwanis Club, displays at community events, and a District Web site. The message varied across each of these methods but generally dealt with water supply issues in the District and education on water conservation. Malissa stated that it was difficult to coordinate efforts across each of these outlets though because she simply did not have enough staff and funding.

Malissa summarized her department's past marketing efforts by stating, "My department worked very hard, but the frustrating part was that with our limited resources, we could not develop a well thought out, consistent message that would reach the necessary target markets. The placement of our advertisements was hit and miss given the nature of public service announcements. We did not have the funding to conduct research concerning our district's water conservation behavior. So we had little information upon which to base our marketing decisions."

Similarly, public water supply utilities undertook marketing efforts to reduce water consumption as required by their Consumptive Use Permits. Most of the water supply utilities employed a strategy analogous to SJRWMD, focusing their efforts on trying to secure publicity to inform individual water users to reduce use. They also conducted programs aimed at specific target audiences including school-age children and adults.

## PROTECTING FLORIDA'S SHRINKING WATER RESOURCES

### SJRWMD's Water Supply Assessment

SJRWMD's 1998 assessment categorized 40 percent of the District as a priority water resource caution area. Priority water resource caution areas were areas where existing and reasonably anticipated sources of water and conservation efforts might not be adequate to supply water for all future needs and to sustain the water resources and ecological systems. Exhibit 3 is a map of District and priority water resource caution areas.

### SJRWMD's Water Supply Plan

Based on the water supply assessment, SJRWMD developed a plan to ensure that residents would have an adequate water supply. In developing the plan, the District considered a number of options, including water conservation, aquifer recharge projects, reusing or reclaiming water from utility systems, and developing alternative water sources from surface water or salt water bodies. In its 2000 Plan, SJRWMD specifically identified water conservation as a very important strategy to help meet the District's water supply needs. Not only was water

conservation a very economical approach, but it was also beneficial for the environment. Moreover, by extending the existing water supply, the District could reduce or delay the need to develop expensive new supply sources and treatment facilities.

**Exhibit 3: Map of St. Johns River Water Management District and Priority Water Resource Caution Areas**

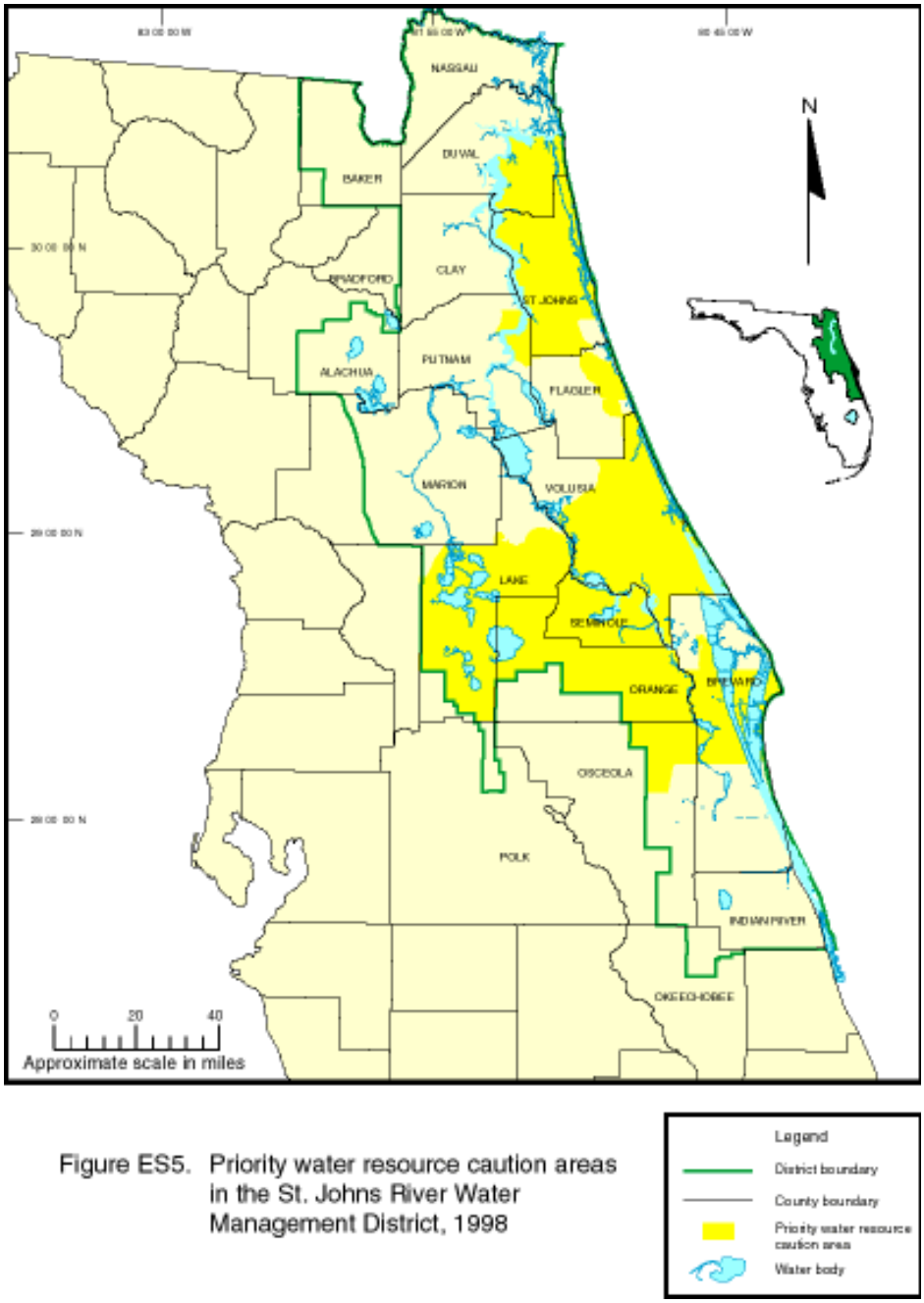


Figure ES5. Priority water resource caution areas in the St. Johns River Water Management District, 1998

*Source: District Water Supply Plan 2000, www.sjrwmd.com*

**Feedback from Marketing Efforts**

The decision to promote water conservation to the St. Johns District residents as a way of meeting their water supply needs added to Malissa's already challenging promotional tasks. Feedback concerning her Department's marketing efforts was somewhat disappointing. She reported that the joint efforts of SJRWMD and the public supply utilities had been successful in reaching a certain percentage of the target audience. However, a large portion of the population was either not receiving the information due to the limited reach of the non-paid media efforts or to people ignoring or misunderstanding the message being communicated.

One drawback to the marketing strategy was the self-selecting nature of the seminar and presentation audience. "In essence, we are preaching to the choir. The typical attendee is already interested in conserving water due to environmental or economic reasons. Much time and effort goes into attracting a relatively small audience that is already motivated and sometimes educated about water conservation," explained Malissa.

In addition, Malissa had concerns about the issue of overlapping but different communications from SJRWMD and the public supply utilities. According to her, "Both the District and water supply utilities work hard to educate residents about conservation. However, these entities distribute separate messages, which are similar for the most part, but have led to some confusion. People report being unsure whether one or both messages apply to them."

There also was confusion among residents because water restrictions could vary within the target audience. Apartment and condominium residents tended to ignore promotional messages because they were not concerned with lawn-watering restrictions. Private well owners believed that restrictions did not apply to them, and thus, they did not need to be concerned with water conservation methods. Communications focusing on the area of most abuse, lawn irrigation, may have led homeowners to feel as though the utilities were singling them out, and thus, they were reluctant to reduce water use. Clearly, however, homeowner education was vital to successful water conservation efforts, given that lawn irrigation accounted for fully 50% of residential water use in the District.

In order to develop benchmarks, SJRWMD hired a market research firm to conduct an objective, broad-based survey. The survey measured District residents' awareness and attitudes concerning water conservation and media sources for water resource information. Together with demographics, survey findings would be used for future promotions planning. Exhibits 4 and 5 summarize telephone survey findings from 743 residents. Findings were organized by four regions within the District: 1) Northern Region – Baker, Bradford, Clay, Duval, Nassau, and St. Johns Counties; 2) North Central Region – Alachua, Flagler, Marion, and Putnam Counties; 3) Central Region – Lake, Orange, Seminole and Volusia Counties; and 4) Southern Region – Brevard, Indian River, Okeechobee, Osceola, and Polk Counties.

## Exhibit 4 - District Survey Results Concerning Water Conservation for 2000

How would you rate your knowledge of water resource issues?

| | Not Knowledgeable | Slightly Knowledgeable | Moderately Knowledgeable | Extremely Knowledgeable | Don't Know | No Answer |
|---|---|---|---|---|---|---|
| Northern (n=253) | 72 | 73 | 88 | 16 | 4 | 0 |
| North Central (n=79) | 26 | 25 | 25 | 3 | 0 | 0 |
| Central (n=307) | 123 | 81 | 91 | 9 | 3 | 0 |
| Southern (n=104) | 27 | 34 | 33 | 8 | 2 | 0 |

How knowledgeable are you concerning water conservation techniques?

| | Not Knowledgeable | Slightly Knowledgeable | Moderately Knowledgeable | Extremely Knowledgeable | Don't Know | No Answer |
|---|---|---|---|---|---|---|
| Northern (n=253) | 77 | 79 | 70 | 23 | 3 | 1 |
| North Central (n=79) | 26 | 22 | 23 | 5 | 3 | 0 |
| Central (n=307) | 103 | 91 | 83 | 20 | 10 | 0 |
| Southern (n=104) | 29 | 30 | 33 | 11 | 1 | 0 |

How concerned are you about water resources in Florida?

| | Not Concerned | Slightly Concerned | Moderately Concerned | Very Concerned | Don't Know | No Answer |
|---|---|---|---|---|---|---|
| Northern (n=253) | 30 | 50 | 71 | 101 | 1 | 0 |
| North Central (n=79) | 7 | 18 | 17 | 37 | 0 | 0 |
| Central (n=307) | 24 | 42 | 91 | 146 | 3 | 1 |
| Southern (n=104) | 6 | 4 | 32 | 62 | 0 | 0 |

How familiar are you with the water resource materials that are available from the St. Johns?

| | Not Familiar | Slightly Familiar | Moderately Familiar | Extremely Familiar | Don't Know | No Answer |
|---|---|---|---|---|---|---|
| Northern (n=253) | 184 | 45 | 13 | 5 | 6 | 0 |
| North Central (n=79) | 63 | 8 | 3 | 3 | 2 | 0 |
| Central (n=307) | 227 | 37 | 20 | 3 | 16 | 4 |
| Southern (n=104) | 75 | 16 | 6 | 3 | 4 | 0 |

How long have you lived in Florida? (in years)

| | < 1 | 1-3 | 4-6 | 7-9 | 10-12 | >12 | Don't Know | No Answer |
|---|---|---|---|---|---|---|---|---|
| Northern (n=253) | 7 | 15 | 23 | 13 | 14 | 169 | 2 | 10 |
| North Central (n=79) | 1 | 7 | 7 | 6 | 9 | 46 | 1 | 2 |
| Central (n=307) | 18 | 33 | 22 | 13 | 24 | 178 | 2 | 17 |
| Southern (n=104) | 3 | 12 | 9 | 5 | 6 | 65 | 0 | 4 |

*Source: Survey conducted by Perceptive Market Research, Inc. for SJRWMD, 2000*

**Exhibit 5: District Survey Results Concerning Water Conservation for 2000: Positive Responses to Possible Sources of Information Regarding Water Resource Issues**

| | Northern (n=253) | North Central (n=79) | Central (n=307) | Southern (n=104) |
|---|---|---|---|---|
| | Yes | Yes | Yes | Yes |
| Television | 162 | 35 | 173 | 59 |
| Radio | 57 | 19 | 68 | 17 |
| Newspapers | 144 | 49 | 184 | 74 |
| Neighbors, Friends | 98 | 33 | 113 | 39 |
| Internet | 36 | 8 | 47 | 6 |
| Public Meetings | 21 | 9 | 38 | 11 |
| Booths at Festivals/Fairs | 29 | 6 | 43 | 17 |
| Speakers at Events or Meetings | 11 | 8 | 21 | 9 |
| Extension Service Agents | 18 | 8 | 21 | 17 |
| Direct Mail | 69 | 17 | 97 | 31 |

*Source: Survey conducted by Perceptive Market Research, Inc. for SJRWMD, 2000*

The survey's results confirmed all of the anecdotal evidence Malissa's Department had collected thus far. She stated that two of the findings were rather disconcerting. Less than 50% of District residents reported being very concerned about water resources, and less than 10% reported being very knowledgeable about water conservation techniques. SJRWMD's message was not being particularly effective. "This provides further evidence that we need broader, more effective methods of communication to successfully educate our audience about water conservation," concluded Malissa.

## CONCLUSION

Malissa knew that the public's attitude, and ultimately, its behavior regarding water habits must change in order for conservation to be a successful strategy for providing enough water for the District's growing population. She also knew that the majority of the responsibility for completing this task would fall on her Department. The budget set for the campaign was just over $1.5 million. The District would have to design the campaign to overcome many challenges, such as the influx of newcomers, the self-selecting nature of seminar participants, and the misconceptions of residents concerning Florida's water supply and water resource issues. Feeling that time was of the essence, Malissa set up a meeting to discuss her campaign ideas with her supervisor, Linda Burnette.

***Teaching Note/Instructor Manual available from the Journal of Business Cases and Applications.***