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DOCKET NO. 990696-WS - APPLICATION FOR ORIGINAL CERTIFICATES TO OPERATE WATER AND WASTEWATER UTILITY IN DUVAL AND ST. JOHNS COUNTIES BY NOCATEE UTILITY CORPORATION.

DOCKET NO. 992040-WS - APPLICATION FOR CERTIFICATES TO OPERATE A WATER AND WASTEWATER UTILITY IN DUVAL AND ST. JOHNS COUNTIES BY INTERCOASTAL UTILITIES, INC.

WITNESS: DIRECT TESTIMONY OF EDWARD CORDOVA, APPEARING ON BEHALF OF STAFF

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FPSC-RECORDS/REPORTING

DIRECT TESTIMONY OF EDWARD CORDOVA

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2 Q. Please state your name and business address.

3 A. My name is Edward Cordova, and I am employed in the Domestic Wastewater
4 Section in the Northeast District Office of the Florida Department of
5 Environmental Protection (DEP). My business address is 7825 Baymeadows Way,
6 Suite B-200, Jacksonville, Florida, 32256

7 Q. Please state a brief description of your educational background.

8 A. I have Bachelor of Science degrees in Environmental and Aerospace
9 engineering from the University of Florida.

10 Q. How long have you been employed with the DEP and in what capacity?

11 A. I have been employed with the DEP for 8 years. I worked in the Industrial
12 Wastewater Section, from October 1992 until November 1997, conducting
13 compliance, enforcement, and permitting duties as an Engineer I, II, and III.
14 In November 1997, I moved to the Potable Water Section as a Professional
15 Engineer I, serving as the permitting supervisor. In March 1998, I moved to
16 the Domestic Wastewater Section as a Professional Engineer II, serving as the
17 compliance/enforcement supervisor. My title was later changed to
18 Compliance/Enforcement Coordinator as a result of a district re-organization.

19 Q. What are your general responsibilities at the DEP?

20 A. Presently, I coordinate all compliance/enforcement activities for the
21 Northeast District's (District) domestic water facilities. I review all
22 compliance documents and provide input on all enforcement activities related
23 to the District's domestic water facilities. I also have reviewed several
24 domestic water permit applications. I work with the permitting coordinator
25 when facilities are subject of both enforcement and permitting issues.

1 Q. Have you testified on behalf of the DEP in previous Public Service
2 Commission (Commission) proceedings?

3 A. No. I have testified in several hearings related to industrial wastewater
4 permits that I issued, but I have not testified in any previous Commission
5 proceedings.

6 Q. What is the purpose of your testimony in this docket?

7 A. The purpose of my testimony is to provide information on the technical
8 ability of Intercoastal Utilities, Inc., (Intercoastal) and Nocatee Utility
9 Corporation (NUC), through an agreement with JEA, to provide wastewater
10 service to the area at issue in NUC's certificate application. My testimony
11 will address the specific concerns the DEP has with respect to wastewater in
12 this area, and the ability of the two utilities to address and satisfy these
13 concerns.

14 Q. Would you explain what you mean by the DEP's concerns relating to
15 wastewater?

16 A. Yes. The DEP's concerns are related to effluent disposal, as this is the
17 primary concern for wastewater treatment plants in this area. For Duval and
18 St. Johns Counties, utilizing reuse and residential reuse is a high priority.
19 This has been reinforced by both the St. Johns River Water Management District
20 and the Commissioners of St. Johns County as a result of salt water intrusion
21 into interior water resources. The St. Johns River Water Management District
22 has designated both counties "Water Resource Caution" areas.

23 In addition, there are only a few large water bodies available for the
24 disposal of effluent in northern St. Johns County and southern Duval County.
25 In this area, there are several wetlands, the St. Johns River and the

1 Intercoastal Waterway (ICWW).

2 A portion of the St. Johns River has been designated an impaired
3 waterway. Any new or expanded discharge to any surface water body would
4 require an anti-degradation study in accordance with Rule 62-4.242(2), Florida
5 Administrative Code. As part of the anti-degradation study, the permittee
6 must demonstrate that their discharge will not impair the receiving water.
7 The permittee must also demonstrate that there is no other reasonable
8 alternative, specifically including reuse, to the discharge to surface water.

9 The recent expansion of JEA's Mandarin plant's discharge is an example
10 of the difficulties involved in obtaining an expanded discharge to surface
11 water. JEA's Mandarin plant recently expanded its discharge to the St. Johns
12 River from 5.0 MGD Annual Average Daily Flow (AADF) to 7.5 MGD AADF. As part
13 of the expansion, its effluent limits were reduced to the level necessary to
14 ensure that actual pollutant loadings to the St. Johns River were not
15 increased. Achieving this reduction required the introduction of biological
16 nutrient reduction (BNR) technology to JEA's Mandarin plant at significant
17 cost.

18 A portion of the ICWW, encompassing the Guana River State Park, has been
19 designated an Outstanding Florida Water (OFW). Any new discharge to the ICWW
20 in the vicinity of the OFW would require a demonstration that the OFW would
21 not be degraded.

22 Q. What would be the role of the DEP with respect to the issues of reuse?

23 A. As stated above, the DEP has significant concerns with new or expanded
24 discharges to the two major surface water bodies in the area. The primary
25 alternative to discharging to these water bodies is to implement reuse.

1 Further, in accordance with Section 403.064 Florida Statutes, all applicants
2 for permits to construct or operate a domestic wastewater treatment facility
3 located within a water resource caution area must prepare a reuse feasibility
4 report as part of its application for the permit. The only exceptions are for
5 those facilities with a design capacity of less than 0.1 million gallons per
6 day (MGD) or those facilities with a reuse capacity equal to or exceeding the
7 total permitted capacity.

8 As stated above, both Duval and St. Johns Counties have been designated
9 water resource caution areas. The purpose of the reuse feasibility report is
10 to have the utility determine if it has the ability to reduce or eliminate its
11 discharge. The report must include an evaluation of the economic,
12 environmental, and technical constraints associated with reuse. Reuse is
13 usually found to be technically feasible, but not economically feasible. The
14 cost of retrofitting existing developments with residential reuse is generally
15 cost prohibitive. If the report complies with the requirements of Section
16 403.064, Florida Statutes, the DEP must accept the findings of the report as
17 to reuse feasibility.

18 Q. Would you discuss the ability of each of the utility systems in this
19 docket to provide reuse?

20 A. NUC:

21 My answer assumes that JEA will provide wholesale wastewater service
22 from its Mandarin plant to the area at issue in NUC's original certificate
23 application. The most recent permit for JEA's Mandarin wastewater treatment
24 facility was issued on November 12, 1996, and expires on November 12, 2001.
25 This permit allows JEA to operate a 7.5 MGD AADF activated sludge plant. The

1 permit was revised on September 30, 1999, to authorize construction of a 2.5
2 MGD AADF public access reuse system. There are provisions to expand the reuse
3 capacity to 5.0 MGD. Several reuse customers have been identified and the
4 reuse distribution system is under construction. The reuse distribution lines
5 are being laid along a path that will place them within several miles of the
6 northwest edge of the Nocatee development. NUC has stated that the Nocatee
7 development's reuse demand will exceed the volume of wastewater generated in
8 the early stages of development. JEA's Mandarin wastewater treatment facility
9 should be able to meet the Nocatee development's excess reuse demands.

10 The last Capacity Analysis Report for JEA's Mandarin wastewater
11 treatment facility was submitted in April of 1994. The Capacity Analysis
12 Report determined that the plant will reach its 7.5 MGD AADF capacity by 2010.
13 This projection would likely have to be modified should JEA's Mandarin plant
14 serve the Nocatee development. The AADF for 1999 was 5.14 MGD.

15 Intercoastal:

16 The DEP issued a permit for Intercoastal's Sawgrass plant on July 31,
17 1997. This permit expires on July 30, 2002. The permit authorized an
18 expansion of the plant from 0.8 MGD to 1.5 MGD. The expansion is now
19 complete. The plant provides 0.3 MGD AADF of reuse for the Sawgrass golf
20 course. The plant discharges the remaining 1.2 MGD AADF to the ICWW. The
21 AADF for 1999 was 0.824 MGD. In a letter dated May 18, 1999, Intercoastal's
22 engineer, Sonny Waitz, stated that there is physically no room for further
23 expansion at Intercoastal's Sawgrass wastewater treatment facility site and
24 the plant will not be expanded beyond the 1.5 MGD current capacity.

25 From the application provided by the Commission, it appears that

1 Intercoastal is proposing to provide initial wastewater service to the area
2 west of its current certified area from a new 1.0 MGD wastewater treatment
3 plant centrally located in the Nocatee community. The plant would be
4 expanded, in phases, to provide treatment capacity through build out. The DEP
5 has no application or any other information regarding this proposed plant.
6 Without such information, it is not possible to fully evaluate the ability of
7 Intercoastal to provide reuse. The proposed plant will include a sequential
8 batch reactor (SBR) treatment unit with filtration and high level disinfection
9 for public access reuse. In theory, such a plant should be adequate to
10 provide public access reuse for the Nocatee development. It has been noted
11 above that in the initial stages of development, the reuse demand for Nocatee
12 will exceed the volume of wastewater being generated. Without an external
13 source for augmentation, such as a connection to Intercoastal's Sawgrass
14 wastewater treatment facility, Intercoastal may not be able to meet the full
15 reuse demand in the early stages of development.

16 Q. Could you discuss whether there are any other concerns the DEP has with
17 respect to NUC's and Intercoastal's facilities and the utilities' ability to
18 provide wastewater service to the area in question?

19 A. Neither JEA, through which NUC is proposing to provide service, nor
20 Intercoastal are currently serving residential areas with reuse. However,
21 this should not be a significant technical hurdle for either utility.

22 As stated above, Intercoastal proposes to construct a 1 MGD AADF plant
23 in the Nocatee development. Intercoastal's Commission application also
24 indicates the plant would have a wet weather discharge to the ICWW. The ICWW
25 has been designated an OFW from the SR 210 bridge south. The tide line is

1 | also very close to this point (i.e. north of the line the ICWW flows in and
2 | out to the St. Johns River, while south of the line, the ICWW flows in and out
3 | toward St. Augustine). Because of this, it would be difficult to approve a
4 | wet weather discharge unless the discharge point was considerably north of the
5 | SR 210 bridge.

6 | Q. Do you have any other comments on the ability of NUC or Intercoastal to
7 | provide wastewater service to the area in question?

8 | A. No. not at this time.

9 | Q. Does this conclude your testimony?

10 | A. Yes.

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