NORTH MIAMI
FLORIDA
776 N.E. 125 Street, North Miami, Florida 33161

Council Report

To: The Honorable Mayor and City Council

From: Aleem A. Ghany, P.E., Public Works Director AG

Date: ~~July 10, 2012~~ **August 28, 2012 (Second Reading)**

RE: **AN ORDINANCE OF THE MAYOR AND CITY COUNCIL OF THE CITY OF NORTH MIAMI, FLORIDA, AMENDING CHAPTER 29 OF THE CITY OF NORTH MIAMI CODE OF ORDINANCES, ENTITLED "LAND DEVELOPMENT REGULATIONS" BY AMENDING ARTICLE 5, DIVISION 12 ENTITLED "LANDSCAPING AND SCREENING", SPECIFICALLY AT SECTION 5-1203 ENTITLED "GENERAL STANDARDS", TO CURTAIL OR RESTRICT CERTAIN USES OF WATER TO CONSERVE AVAILABLE WATER RESOURCES DURING A DECLARED WATER SHORTAGE OR WATER SHORTAGE EMERGENCY, IN ACCORDANCE WITH THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT REGULATIONS; PROVIDING FOR CONFLICTS, REPEAL, SEVERABILITY, CODIFICATION, AND AN EFFECTIVE DATE.**

RECOMMENDATION

That the North Miami City Council recommend approval of the proposed ordinance to amend Article 5 Section 5-1203 of the City's Land Development Regulation (LDR) to meet the permit requirements of the South Florida Water Management District Water Use Permit (WUP) No. Re-Issue 13-00059-W.

BACKGROUND

On October 12, 2007, the City of North Miami applied for a modification and renewal of the Consumptive Use Permit with the South Florida Water Management District (SFWMD). A renewal and modification was approved by SFWMD on August 23, 2010, allowing the City of North Miami to withdraw up to 6,304 million gallons of raw water per year in 2030 to be treated and distributed to its projected 2030 service area population of 108,267 people.

Water Use permit No. Re-Issue 13-00059-W contains 28 limiting conditions identifying details of the permit and requirements of the City of North Miami. Limiting Condition 24 and the Permit Staff Review Summary (page 8 of 14, WATER CONSERVATION), require a Water Conservation Plan, including ordinances for Florida Friendly Landscape, and rain sensor devices.

As such, City of North Miami Public Works staff has coordinated extensively with SFWMD staff to create the proposed ordinance language, which would satisfy the requirements of Limiting Condition 24 and the Staff Review summary.

North Miami must maintain its Consumptive Use Permit in order to provide water to its customers. The SFWMD may permanently or temporarily revoke, in whole or in part, this permit for the violation of the conditions or the permit or for the violation of any provision of the Water Resources Act and regulations (attached). Therefore, the City of North Miami must amend its Code of Ordinances utilizing the proposed language to abide by the conditions of the Consumptive Use Permit. Staff believes the proposed amendment is in keeping with the goals, policies and objectives of the City's Comprehensive Plan. As such, staff requests that the City Council recommends adoption of the proposed ordinance.

Attachments

(1) Proposed Ordinance
(2) Consumptive Use Permit
(3) Planning Commission Approval

ORDINANCE NO._____

AN ORDINANCE OF THE MAYOR AND CITY COUNCIL OF THE CITY OF NORTH MIAMI, FLORIDA, AMENDING CHAPTER 29 OF THE CITY OF NORTH MIAMI CODE OF ORDINANCES, ENTITLED "LAND DEVELOPMENT REGULATIONS" BY AMENDING ARTICLE 5, DIVISION 12 ENTITLED "LANDSCAPING AND SCREENING", SPECIFICALLY AT SECTION 5-1203 ENTITLED "GENERAL STANDARDS", TO CURTAIL OR RESTRICT CERTAIN USES OF WATER TO CONSERVE AVAILABLE WATER RESOURCES DURING A DECLARED WATER SHORTAGE OR WATER SHORTAGE EMERGENCY, IN ACCORDANCE WITH THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT REGULATIONS; PROVIDING FOR REPEAL, CONFLICTS, SEVERABILITY, CODIFICATION, AND AN EFFECTIVE DATE.

WHEREAS, the South Florida Water Management District ("SFWMD") has the responsibility and exclusive authority under Chapter 373, Florida Statutes, for regulating the consumptive use of water; and

WHEREAS, charged with the responsibility of protecting the water resources within Miami-Dade County, the SFWMD may from time to time, declare a water shortage or water shortage emergency and order the curtailment or restriction of certain uses of water; and

WHEREAS, water shortage conditions increase the probability of saline water intrusion into potable water reserves, further decreasing consumable water supplies; and

WHEREAS, the existence of such conditions make it imperative to the public welfare that certain uses of water be curtailed or restricted, consistent with the SFWMD water shortage plan, so that available water resources be conserved and preserved; and

WHEREAS, the SFWMD has amended Rule 40E-24, Florida Administrative Code ("FAC"), requiring year-round water conservation for landscape irrigation; and

WHEREAS, the FAC applies to all landscape irrigation in Miami-Dade County regardless of whether the water supply comes from ground or surface water, from a private well or pump, or from a public or private utility; and

WHEREAS, the City Planning Commission held a duly noticed public hearing, and unanimously recommended approval of the proposed amendment to the Mayor and City Council; and

WHEREAS, the City Administration respectfully requests that the proposed amendment to the ordinance be approved by the Mayor and City Council, in order to comply with SFWMD requirements; and

WHEREAS, the Mayor and City Council of the City of North Miami hereby find that adoption of the proposed ordinance is appropriate and in the best interests of the City.

NOW THEREFORE, BE IT ORDAINED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF NORTH MIAMI, FLORIDA, THAT:

Section 1. The Mayor and City Council of the City of North Miami, Florida, hereby amend Chapter 29 of the City of North Miami Code of Ordinances, entitled "Land Development Regulations" by amending Article 5, Division 12 entitled "Landscaping and Screening", specifically at Section 5-1203 entitled "General Standards", to curtail or restrict certain uses of water to conserve available water resources during a declared water shortage or water shortage emergency, in accordance with the South Florida Water Management District regulations, as follows:

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CHAPTER 29. LAND DEVELOPMENT REGULATIONS

* * * * *

ARTICLE 5. DEVELOPMENT STANDARDS

* * * * *

DIVISION 12. LANDSCAPING AND SCREENING.

Sec. 5-1203. - General Standards.

A. *Installation.* All landscaping shall be installed in a sound workmanship like manner and according to accepted good planting procedures with the quality of plant materials as hereinafter described. All elements of landscaping shall be installed so as to meet all other applicable ordinances and code requirements. Landscaped areas shall require protection from vehicular encroachment.

B. *Maintenance*. All landscaping shall be permanently maintained in good condition with at least the same quality and quantity of landscaping as initially approved so as to present a healthy, neat and orderly appearance; and shall be provided with adequate irrigation within fifty (50) feet for the maintenance of grass, shrubs, ground covering and other landscaping by utilizing an irrigation system which complies with the following standards: Dead trees shall be replaced immediately with similar, minimum sized trees.

1. Use of non-treated water for irrigation is encouraged if a permanent suitable supply is available.
2. Required landscaping shall be irrigated with a permanent irrigation system.
3. Temporary irrigation may be used to establish native grasses and vegetation.
4. Separate landscape water meters shall be installed for all regulated landscapes.
5. All automatic lawn sprinkler systems shall be equipped with an automatic rain shut-off device. Any person who purchases and installs an automatic lawn sprinkler system must install, operate, and maintain a rain sensor device or automatic switch to override the irrigation cycle of the sprinkler system when adequate rainfall has occurred.

C. Plant Standards.

1. *Type*. Landscape materials shall be selected from and follow the guiding principles of the Florida Friendly Landscaping Plant Selection Guide on file with the Building and Zoning Department with due regard to ~~xeriscape principles and~~ drought-tolerant species, including:
   a. Well-planned planting schemes;
   b. Use of mulch to maintain soil moisture and reduce evaporation;
   c. Zoning of plant materials according to their microclimatic needs and water requirements;
   d. Improvement of the soil with organic matter if needed;
   e. Efficient irrigation systems; and
   f. Proper maintenance and irrigation schedules.

2. *Quality*. Plant materials used in conformance with provisions of this Division shall conform to the Standards for Florida No. 1 or better as given in "Grades & Standards for Nursery Plants" Part I, 1973 and Part II, State of Florida, Department of Agriculture, Tallahassee, or equal thereto. Grass sod shall be clean and reasonably free of weeds and noxious pests or diseases. Grass seed shall be delivered to the job site in bags with Florida Department of Agriculture tags attached indicating the seed growers compliance with the department's quality control program.

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Section 2. **Repeal.** All ordinances or parts of ordinances in conflict herewith are repealed.

Section 3. **Conflicts.** In the event that the provisions of this Ordinance are in conflict with any other ordinance, rule or regulation, the provisions of this Ordinance shall prevail.

Section 4. **Severability.** If any word, clause, phrase, sentence, paragraph or section of this Ordinance is held to be invalid by a court of competent jurisdiction, such declaration of invalidity shall not affect any other word, clause, phrase, sentence, paragraph or section of this Ordinance.

Section 5. **Codification.** The provisions of this Ordinance may become and be made a part of the code of ordinances of the City of North Miami, Florida. The sections of the Ordinance may be renumbered or re-lettered to accomplish such, and the word "ordinance" may be changed to "section," "article" or any other appropriate word.

Section 6. **Effective Date.** This Ordinance shall be effective immediately upon adoption on second reading.

PASSED AND ADOPTED by a 5-0 vote of the Mayor and City Council of the City of North Miami, Florida, on first reading this 10 day of July, 2012.

PASSED AND ADOPTED by a _____ vote of the Mayor and City Council of the City of North Miami, Florida, on second reading this _____ day of _____, 2012.

_____
ANDRE D. PIERRE, ESQ.
MAYOR

ATTEST:

_____
MICHAEL A. ETIENNE, ESQ.
CITY CLERK

APPROVED AS TO FORM AND
LEGAL SUFFICIENCY:

_____
REGINE M. MONESTIME
CITY ATTORNEY

SPONSORED BY: CITY ADMINISTRATION

Moved by: _____

Seconded by: _____

Vote:

Mayor Andre D. Pierre, Esq.	_____ (Yes)	_____ (No)
Vice Mayor Jean R. Marcellus	_____ (Yes)	_____ (No)
Councilperson Michael R. Blynn, Esq.	_____ (Yes)	_____ (No)
Councilperson Scott Galvin	_____ (Yes)	_____ (No)
Councilperson Marie Erlande Steril	_____ (Yes)	_____ (No)

Additions shown by underlining. Deletions shown by ~~overstriking~~.

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
WATER USE PERMIT NO. RE-ISSUE 13-00059-W
NON-ASSIGNABLE

Date Issued: August 23, 2010 Expiration Date: August 23, 2030

Authorizing: THE USE OF GROUND WATER FROM THE BISCAYNE AQUIFER AND FLORIDAN AQUIFER SYSTEM FOR PUBLIC WATER SUPPLY USE WITH AN ANNUAL ALLOCATION OF 6303.55 MILLION GALLONS.

Located In: Miami-Dade County, S26/T52S/R41E
S26/T52S/R42E

Issued To: CITY OF NORTH MIAMI
(CITY OF NORTH MIAMI)
776 NE 125 ST,
NORTH MIAMI, FL 33161

This is to notify you of the District's agency action concerning Permit Application No. 071012-6, dated October 12, 2007. This action is taken pursuant to the provisions of Chapter 373, Part II, Florida Statutes (F.S.), Rule 40E-1.603 and Chapter 40E-2, Florida Administrative Code (F.A.C.). Based on the information provided, District rules have been adhered to and a Water Use Permit is in effect for this project subject to:

1. Not receiving a filed request for an administrative hearing pursuant to Section 120.5 and Section 120.569, or request a judicial review pursuant Section 120.68, Florida Statutes.
2. The attached 28 Limiting Conditions.
3. The attached 13 exhibits.

Permittee agrees to hold and save the South Florida Water Management District and its successors harmless from any and all damages, claims or liabilities which may arise by reason of the construction, maintenance or use of activities authorized by this permit. Said application, including all plan and specifications attached thereto, is by reference made a part hereof.Upon written notice to permittee, this permit may be temporarily modified, or restricted under a Declaration of Water Shortage or a Declaration of Emergency due to Water Shortage in accordance with provisions of Chapter 373, Fla. Statutes, and applicable rules and regulations of the South Florida Water Management District. This Permit may be permanently or temporarily revoked, in whole or in part, for the violation of the conditions of the permit or for the violation of any provision of the Water Resources Act and regulations thereunder. This Permit does not convey to the permittee any property rights nor any privileges other than those specified herein, nor relieve the permittee from complying with any law, regulation, or requirement affecting the rights of other bodies or agencies.

Should you object to these conditions, please refer to the attached "Notice of Rights" which addresses the procedures to be followed if you desire a public hearing or other review of the proposed agency action. Should you wish to object to the proposed agency action or file a petition or request, please provide written objections, petitions, requests and/or waivers to:

Elizabeth Veguilla, Deputy Clerk, MSC2440
South Florida Water Management District
Post Office Box 24680
West Palm Beach, FL 33416-4680

Please contact this office if you have any questions concerning this matter. If we do not hear from you in accordance with the "Notice of Rights", we will assume that you concur with the District's action.

CERTIFICATION OF SERVICE

I HEREBY CERTIFY that the Staff Report, Conditions and Notice of Rights have been mailed to the Permittee (and the persons listed on the attached staff report distribution list) no later than 5:00 p.m. on this 24th day of August, 2010, in accordance with Section 120.60(3), Florida Statutes, and a copy has been filed and acknowledged with the Deputy District Clerk.

ORIGINAL SIGNED BY
By JACKI MCGORTY
DEPUTY CLERK
SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Attachments
CERTIFIED MAIL# 70050390000598196998

LIMITING CONDITIONS

1. This permit shall expire on August 23, 2030.

2. Application for a permit modification may be made at any time.

3. Water use classification:

   Public water supply

4. Source classification is:

   Ground Water from:
   Biscayne Aquifer
   Floridan Aquifer System

5. Annual allocation shall not exceed 6304 MG.

   Maximum monthly allocation shall not exceed 616.855 MG.

   The following limitations to annual withdrawals from specific sources are stipulated:
   Biscayne Aquifer-: 3,395 MG.
   Floridan Aquifer System-: 2,909 MG.

   The following limitations to maximum monthly withdrawals from specific sources are stipulated:
   Biscayne Aquifer-: 282.72 MG.
   Floridan Aquifer System-: 334.13 MG.

6. Pursuant to Rule 40E-1.6105, F.A.C., Notification of Transfer of Interest in Real Property, within 30 days of any transfer of interest or control of the real property at which any permitted facility, system, consumptive use, or activity is located, the permittee must notify the District, in writing, of the transfer giving the name and address of the new owner or person in control and providing a copy of the instrument effectuating the transfer, as set forth in Rule 40E-1.6107, F.A.C.

   Pursuant to Rule 40E-1.6107 (4), until transfer is approved by the District, the permittee shall be liable for compliance with the permit. The permittee transferring the permit shall remain liable for all actions that are required as well as all violations of the permit which occurred prior to the transfer of the permit.

   Failure to comply with this or any other condition of this permit constitutes a violation and pursuant to Rule 40E-1.609, Suspension, Revocation and Modification of Permits, the District may suspend or revoke the permit.

   This Permit is issued to:

   CITY OF NORTH MIAMI
   c/o MARK E. COLLINS
   776 NE 125 ST
   NORTH MIAMI, FL 33161

7. Withdrawal Facilities:

   Ground Water - Existing:

   1 - 12" X 124' X 1500 GPM Well Cased To 100 Feet
   1 - 12" X 62' X 1100 GPM Well Cased To 52 Feet

1 - 12" X 107' X 1100 GPM Well Cased To 99 Feet
1 - 12" X 60' X 1500 GPM Well Cased To 45 Feet
1 - 12" X 56' X 1100 GPM Well Cased To 45 Feet
1 - 12" X 60' X 1100 GPM Well Cased To 50 Feet
1 - 12" X 104' X 1500 GPM Well Cased To 90 Feet
1 - 12" X 65' X 1500 GPM Well Cased To 57 Feet

Ground Water - Proposed:

10 - 16" X 1250' X 2500 GPM Wells Cased To 1000 Feet

8. Permittee shall mitigate interference with existing legal uses that was caused in whole or in part by the permittee's withdrawals, consistent with the approved mitigation plan. As necessary to offset the interference, mitigation will include pumpage reduction, replacement of the impacted individual's equipment, relocation of wells, change in withdrawal source, or other means.

   Interference to an existing legal use is defined as an impact that occurs under hydrologic conditions equal to or less severe than a 1 in 10 year drought event that results in the:

   (1) Inability to withdraw water consistent with provisions of the permit, such as when remedial structural or operational actions not materially authorized by existing permits must be taken to address the interference; or

   (2) Change in the quality of water pursuant to primary State Drinking Water Standards to the extent that the water can no longer be used for its authorized purpose, or such change is imminent.

9. Permittee shall mitigate harm to existing off-site land uses caused by the permittee's withdrawals, as determined through reference to the conditions for permit issuance. When harm occurs, or is imminent, the District will require the permittee to modify withdrawal rates or mitigate the harm. Harm caused by withdrawals, as determined through reference to the conditions for permit issuance, includes:

   (1) Significant reduction in water levels on the property to the extent that the designed function of the water body and related surface water management improvements are damaged, not including aesthetic values. The designed function of a water body is identified in the original permit or other governmental authorization issued for the construction of the water body. In cases where a permit was not required, the designed function shall be determined based on the purpose for the original construction of the water body (e.g. fill for construction, mining, drainage canal, etc.)

   (2) Damage to agriculture, including damage resulting from reduction in soil moisture resulting from consumptive use; or

   (3) Land collapse or subsidence caused by reduction in water levels associated with consumptive use.

10. Permittee shall mitigate harm to the natural resources caused by the permittee's withdrawals, as determined through reference to the conditions for permit issuance. When harm occurs, or is imminent, the District will require the permittee to modify withdrawal rates or mitigate the harm. Harm, as determined through reference to the conditions for permit issuance includes:

    (1) Reduction in ground or surface water levels that results in harmful lateral movement of the fresh water/salt water interface,

    (2) Reduction in water levels that harm the hydroperiod of wetlands,

    (3) Significant reduction in water levels or hydroperiod in a naturally occurring water body such as a lake or pond,

    (4) Harmful movement of contaminants in violation of state water quality standards, or

(5) Harm to the natural system including damage to habitat for rare or endangered species.

11. If any condition of the permit is violated, the permit shall be subject to review and possible modification, enforcement action, or revocation.

12. Authorized representatives of the District shall be permitted to enter, inspect, and observe the permitted system to determine compliance with special conditions.

13. The Permittee is advised that this permit does not relieve any person from the requirement to obtain all necessary federal, state, local and special district authorizations.

14. The permit does not convey any property right to the Permittee, nor any rights and privileges other than those specified in the Permit and Chapter 40E-2, Florida Administrative Code.

15. Permittee shall submit all data as required by the implementation schedule for each of the limiting conditions to: SFWMD, Environmental Resource Compliance, P.O. Box 24680, West Palm Beach, FL 33416-4680.

16. In the event of a declared water shortage, water withdrawal reductions will be ordered by the District in accordance with the Water Shortage Plan, Chapter 40E-21, F.A.C. The Permittee is advised that during a water shortage, pumpage reports shall be submitted as required by Chapter 40E-21, F.A.C.

17. Prior to the use of any proposed water withdrawal facility authorized under this permit, unless otherwise specified, the Permittee shall equip each facility with a District-approved operating water use accounting system and submit a report of calibration to the District, pursuant to Section 4.1, Basis of Review for Water Use Permit Applications.

    In addition, the Permittee shall submit a report of recalibration for the water use accounting system for each water withdrawal facility (existing and proposed) authorized under this permit every five years from each previous calibration, continuing at five-year increments.

18. Monthly withdrawals for each withdrawal facility shall be submitted to the District quarterly. The water accounting method and means of calibration shall be stated on each report.

19. The Permittee shall notify the District within 30 days of any change in service area boundary. If the Permittee will not serve a new demand within the service area for which the annual allocation was calculated, the annual allocation may then be subject to modification and reduction.

20. The Permittee shall notify the District within 30 days of entry into an inter-local agreement, contract, or other similar instrument to deliver or receive water outside of its service area or to serve a demand not identified to determine the allocation described in this permit. A copy of such agreement shall be provided to the District. The monthly volume of water delivered and/or received via each inter-local agreement, contract, or other similar instrument shall be submitted to the District on a quarterly basis.

21. Permittee shall determine unaccounted-for distribution system losses. Losses shall be determined for the entire distribution system on a monthly basis. Permittee shall define the manner in which unaccounted-for losses are calculated. Data collection shall begin within six months of Permit issuance. Loss reporting shall be submitted to the District on a yearly basis from the date of Permit issuance.

22. Permittee shall maintain an accurate flow meter at the intake of the water treatment plant for the purpose of measuring daily inflow of water.

23. Every ten years from the date of permit issuance, the permittee shall submit a water use compliance report for review and approval by District Staff, which addresses the following:

    1. The results of a water conservation audit that documents the efficiency of water use on the project site using data produced from an onsite evaluation conducted. In the event that the audit indicates additional water conservation is appropriate or the per capita use rate authorized in the permit is exceeded, the permittee shall propose and implement

specific actions to reduce the water use to acceptable levels within timeframes proposed by the permittee and approved by the District.

2. A comparison of the permitted allocation and the allocation that would apply to the project based on current District allocation rules and updated population and per capita use rates. In the event the permit allocation is greater than the allocation provided for under District rule, the permittee shall apply for a letter modification to reduce the allocation consistent with District rules and the updated population and per capita use rates to the extent they are considered by the District to be indicative of long term trends in the population and per capita use rates over the permit duration. In the event that the permit allocation is less than allowable under District rule, the permittee shall apply for a modification of the permit to increase the allocation if the permittee intends to utilize an additional allocation, or modify its operation to comply with the existing conditions of the permit.

24. The Water Conservation Plan required by Section 2.6.1 of the Basis of Review for Water Use Permit Applications within the South Florida Water Management District, must be implemented in accordance with the approved implementation schedule.

25. If a proposed well location is different from a location specified in the application, the Permittee shall submit to the District an evaluation of the impact of pumpage from the proposed well location on adjacent existing legal uses, pollution sources, environmental features, the saline water interface, and water bodies one month prior to all new well construction. The Permittee is advised that the proposal must be in compliance with all permitting criteria and performance standards in effect at the time of submittal, and that a formal modification of the permit shall be required if the withdrawals from the well location will result in an environmental or resource impact significantly greater than that anticipated in the permit review process.

26. If at any time there is an indication that the well casing, valves, or controls leak or have become inoperative, repairs or replacement shall be made to restore the system to an operating condition. Failure to make such repairs shall be cause for filling and abandoning the well, in accordance with procedures outlined in Chapters 40E-3 and 40E-30, Florida Administrative Code.

27. The Permittee shall submit to the District an updated Well Description Table (Table A) within one month of completion of the proposed wells identifying the actual total and cased depths, pump manufacturer and model numbers, pump types, intake depths and type of meters.

28. The Permittee's monitoring plan shall be implemented as follows:
Continue to record water levels and chloride concentrations in Monitor wells F-275, F-279, G-3224, G-894, and the Gratigny Monitor Well. Record chloride concentrations in each Biscayne aquifer production well and Facility @ G-297 (121 & 4th). The locations of these monitor wells are shown on Exhibit 3. Construction details are shown on Exhibit 4.

NOTICE OF RIGHTS

As required by Sections 120.569(1), and 120.60(3), Fla. Stat., following is notice of the opportunities which may be available for administrative hearing or judicial review when the substantial interests of a party are determined by an agency. Please note that this Notice of Rights is not intended to provide legal advice. Not all the legal proceedings detailed below may be an applicable or appropriate remedy. You may wish to consult an attorney regarding your legal rights.

RIGHT TO REQUEST ADMINISTRATIVE HEARING

A person whose substantial interests are or may be affected by the South Florida Water Management District's (SFWMD or District) action has the right to request an administrative hearing on that action pursuant to Sections 120.569 and 120.57, Fla. Stat. Persons seeking a hearing on a District decision which does or may determine their substantial interests shall file a petition for hearing with the District Clerk within 21 days of receipt of written notice of the decision, unless one of the following shorter time periods apply: 1) within 14 days of the notice of consolidated intent to grant or deny concurrently reviewed applications for environmental resource permits and use of sovereign submerged lands pursuant to Section 373.427, Fla. Stat.; or 2) within 14 days of service of an Administrative Order pursuant to Subsection 373.119(1), Fla. Stat. "Receipt of written notice of agency decision" means receipt of either written notice through mail, or electronic mail, or posting that the District has or intends to take final agency action, or publication of notice that the District has or intends to take final agency action. Any person who receives written notice of a SFWMD decision and fails to file a written request for hearing within the timeframe described above waives the right to request a hearing on that decision.

Filing Instructions

The Petition must be filed with the Office of the District Clerk of the SFWMD. Filings with the District Clerk may be made by mail, hand-delivery or facsimile. **Filings by e-mail will not be accepted.** Any person wishing to receive a clerked copy with the date and time stamped must provide an additional copy. A petition for administrative hearing is deemed filed upon receipt during normal business hours by the District Clerk at SFWMD headquarters in West Palm Beach, Florida. Any document received by the office of the SFWMD Clerk after 5:00 p.m. shall be filed as of 8:00 a.m. on the next regular business day. Additional filing instructions are as follows:

- Filings by mail must be addressed to the Office of the SFWMD Clerk, P.O. Box 24680, West Palm Beach, Florida 33416.
- Filings by hand-delivery must be delivered to the Office of the SFWMD Clerk. **Delivery of a petition to the SFWMD's security desk does not constitute filing. To ensure proper filing, it will be necessary to request the SFWMD's security officer to contact the Clerk's office.** An employee of the SFWMD's Clerk's office will receive and file the petition.
- Filings by facsimile must be transmitted to the SFWMD Clerk's Office at (561) 682-6010. Pursuant to Subsections 28-106.104(7), (8) and (9), Fla. Admin. Code, a party who files a document by facsimile represents that the original physically signed document will be retained by that party for the duration of that proceeding and of any subsequent appeal or subsequent proceeding in that cause. Any party who elects to file any document by facsimile shall be responsible for any delay, disruption, or interruption of the electronic signals and accepts the full risk that the document may not be properly filed with the clerk as a result. The filing date for a document filed by facsimile shall be the date the SFWMD Clerk receives the complete document.

Initiation of an Administrative Hearing

Pursuant to Rules 28-106.201 and 28-106.301, Fla. Admin. Code, initiation of an administrative hearing shall be made by written petition to the SFWMD in legible form and on 8 and 1/2 by 11 inch white paper. All petitions shall contain:

1. Identification of the action being contested, including the permit number, application number, District file number or any other SFWMD identification number, if known.
2. The name, address and telephone number of the petitioner and petitioner's representative, if any.
3. An explanation of how the petitioner's substantial interests will be affected by the agency determination.
4. A statement of when and how the petitioner received notice of the SFWMD's decision.
5. A statement of all disputed issues of material fact. If there are none, the petition must so indicate.
6. A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the SFWMD's proposed action.
7. A statement of the specific rules or statutes the petitioner contends require reversal or modification of the SFWMD's proposed action.
8. If disputed issues of material fact exist, the statement must also include an explanation of how the alleged facts relate to the specific rules or statutes.
9. A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the SFWMD to take with respect to the SFWMD's proposed action.

A person may file a request for an extension of time for filing a petition. The SFWMD may, for good cause, grant the request. Requests for extension of time must be filed with the SFWMD prior to the deadline for filing a petition for hearing. Such requests for extension shall contain a certificate that the moving party has consulted with all other parties concerning the extension and that the SFWMD and any other parties agree to or oppose the extension. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

If the District takes action with substantially different impacts on water resources from the notice of intended agency decision, the persons who may be substantially affected shall have an additional point of entry pursuant to Rule 28-106.111, Fla. Admin. Code, unless otherwise provided by law.

Mediation

The procedures for pursuing mediation are set forth in Section 120.573, Fla. Stat., and Rules 28-106.111 and 28-106.401-.405, Fla. Admin. Code. The SFWMD is not proposing mediation for this agency action under Section 120.573, Fla. Stat., at this time.

RIGHT TO SEEK JUDICIAL REVIEW

Pursuant to Sections 120.60(3) and 120.68, Fla. Stat., a party who is adversely affected by final SFWMD action may seek judicial review of the SFWMD's final decision by filing a notice of appeal pursuant to Florida Rule of Appellate Procedure 9.110 in the Fourth District Court of Appeal or in the appellate district where a party resides and filing a second copy of the notice with the SFWMD Clerk within 30 days of rendering of the final SFWMD action.

Last Date for Agency Action:
August 23, 2010

Water Use Staff Review Summary

Application Number: 071012-6

Permit Number: 13-00059-W

Project Name: CITY OF NORTH MIAMI

FINAL APPROVED BY THE EXECUITIVE DIRECTOR AUGUST 23, 2010

Water Use Permit Status: MODIFICATION/RENEWAL

Environmental Resource Permit Status: NOT APPLICABLE.

Right Of Way Permit Status: NOT APPLICABLE

Location: MIAMI-DADE COUNTY, S26/T52S/R41E
S26/T52S/R42E

Applicant's Name and Address: CITY OF NORTH MIAMI
776 NE 125 ST
NORTH MIAMI, FL 33161

Purpose:
The purpose of this application is to renew and modify Water Use Permit 13-00059-W for public water supply for the City of North Miami. The applicant is requesting a raw water allocation of 6,303.55 million gallons per year (mgy) [an average of 17.27 million gallons per day (mgd)] to provide 5,509 mgy of finished water (15.09 million gallons per day) to an estimated 108,267 people within its service area through the year 2030. The applicant is requesting to withdraw up to 8.73 mgd from the Biscayne aquifer and 8.72 mgd from the Floridan aquifer system on an average annual basis.

Withdrawals are from the Biscayne aquifer via 8 existing withdrawal facilities and from the Floridan aquifer system via 10 proposed withdrawal facilities.

Project Summary

Expiration Date: August 23, 2030

Water Use Classification: Public Water Supply

Sources: **Ground Water from:** Biscayne Aquifer
Floridan Aquifer System

Authorized Allocation:

Annual Allocation: 6,304 Million Gallons (MG)
Maximum Monthly Allocation: 616.9 Million Gallons (MG)

Specific Source Limitations:	Annual(MG)	Monthly(MG)	Daily(MG)
Biscayne Aquifer	3394.5	282.72	9.3
Floridan Aquifer System	2909.05	334.13	

Existing Withdrawal Facilities - Ground Water

Source: Biscayne Aquifer
1 - 12" X 56' X 1100 GPM Well Cased to 45 Feet
1 - 12" X 65' X 1500 GPM Well Cased to 57 Feet
1 - 12" X 62' X 1100 GPM Well Cased to 52 Feet
1 - 12" X 124' X 1500 GPM Well Cased to 100 Feet
1 - 12" X 60' X 1100 GPM Well Cased to 50 Feet
1 - 12" X 104' X 1500 GPM Well Cased to 90 Feet
1 - 12" X 60' X 1500 GPM Well Cased to 45 Feet
1 - 12" X 107' X 1100 GPM Well Cased to 99 Feet

Proposed Withdrawal Facilities - Ground Water

Source: Floridan Aquifer System
10 - 16" X 1250' X 2500 GPM Wells Cased to 1000 Feet

Rated Capacity

Source	Status Code	GPM	MGM	MGY
Biscayne Aquifer	E	10,400	455.3	5,466
Floridan Aquifer System	P	25,000	1,094.4	13,140
Totals:		**35,400**	**1,549.7**	**18,606**

Project Description

The City of North Miami (the City) currently provides potable water for municipal use to an estimated 91,401 people (2009) within its service area, which is located in northeast Miami-Dade County (Exhibit 1-3). The City's water-service area incorporates approximately 40 square miles in Township 45 South, Ranges 41 and 42 East in Miami-Dade County.

EXISTING FACILITIES

The City of North Miami's Norman H. Winson Water Plant wellfield consists of 8 existing Biscayne aquifer raw water supply wells (Exhibit 3 and 4). The treatment plant uses lime softening, filtration and chloramines for disinfection and is currently permitted to treat 9.3 mgd of raw Biscayne aquifer water. The plant maintains 2 ground storage tanks with a capacity of 2.25 mgd.

HISTORY

The City has been had a public water supply consumptive use permit issued by the South Floirda Water Management District (District) since 1977. The allocation issued in 1977 was for 3.39 billion gallons per year, or 9.3 mgd. The maximum-day allocation also was limited to 9.3 mgd, which corresponds to the capacity of the treatment plant. Their most recent permit was issued on December 12, 2002 for a five-year duration. When the 2002 permit was issued, the City's finished water demands exceeded the capacity (9.3 mgd) of their existing lime-softening treatment plant. The City met demands beyond their allocation through a bulk services agreement with Miami-Dade County Water and Sewer Department (MDWASD). The 2002 permit authorized the City to continue to withdraw up to 9.3 mgd from the Biscayne aquifer on an average-annual and maximum-monthly basis. Projected demands beyond the 9.3 mgd allocation (estimated to be 13.44 mgd on an annual basis and 16.8 mgd on a maximum-monthly basis in 2007) were met through the MDWASD Bulk Sales Agreement.

MODIFICATION REQUEST

On October 12, 2007, the City of North Miami timely applied for a modification and renewal of their consumptive use permit. The applicant requested an allocation to provide treated water for up to 108,267 people in the year 2030. The City of North Miami worked closely with District staff in developing projections of customer demands (finished water use). The population projections were developed by analyzing the Traffic Analysis Zones with Miami-Dade County, Miami-Dade County Water and Wastewater Services Department and the District and are reflective of populations approved by the Department of Community Affairs through the prevailing Comprehensive Land Use Plan Amendment. The City is proposing to install 10 Floridan aquifer system wells (Exhibits 3 and 4) and construct a reverse-osmosis treatment plant. Upon completion of these wells and treatment system, the City intends to cease purchasing bulk treated water from MDWASD on a regular basis.

RAW WATER DEMANDS

Average Annual Demands

Based on historical water use (Exhibit 6A) and the criteria of Section 2.6.3 of the District's Basis of Review for Consumptive Use Permits (BOR), the City's projected finished per capita use rate is 139.4 gallons per capita per day. Exhibit 6B shows projected finished and raw water demands for each year through 2030 based on projected population. The projections indicate that the population of the service area will increase from 92,220 people in 2010 to 108,267 people in 2030. The total finished water demand for the year 2030 is 5,509 mgy (15.09 mgd).

Per Section 3.2.1.E of the (BOR), pumpage reports for the City were evaluated for the five years preceding April 1, 2006 and show the base condition water use was 3,185.39 mgy (average of 8.73 mgd) as shown in Exhibit 5. Analytical groundwater flow modeling was conducted in order to evaluate the

potential impact to the regional system due to a total Biscayne aquifer withdrawal rate of 9.3 mgd (an additional 0.57 mgd over the baseline condition). Results of this modeling indicate that less than 0.1 feet of additional drawdown will occur at the nearest Lower East Coast Everglades Waterbody. Therefore, no harm to the regional system will occur as specified in Section 3.2.1.E of the BOR (Exhibit 11F).

All water required to meet the service area demands beyond the recommended Biscayne aquifer source limit of 9.3 mgd will be provided through the bulk sales agreement with MDWASD until the proposed Floridan aquifer system treatment facility is completed. The City estimates the wells and treatment facility will be completed by the end of 2018. Water from the Floridan aquifer system will be treated by reverse osmosis technology, which typically results in up to 25 percent loss of the raw water in order to produce potable water. The efficiency of the lime-softening plant results in a 2 percent treatment loss for Biscayne aquifer withdrawals.

The total annual projected finished demand of 5,509 mgy (15.09 mgd) will be met through the withdrawal of 3,394.5 mg (9.3 mgd) of raw Biscayne aquifer water (9.11 mgd finished water) and approximately 2,909 mgy (7.97 mgd) of raw Floridan aquifer system water (5.98 mgd finished water), for a total raw water allocation of 6,303.55 mgy. Exhibit 6B provides a more detailed description of how these quantities are derived.

Maximum-Monthly Demands

The ratio used to project the maximum monthly allocation water use to the average monthly water use is 1.15 to 1, as per Section 2.6.4 of the BOR (Exhibit 6A). Utilizing this ratio, the projected maximum-monthly finished-water demand will be about 527.6 million gallons per month (mgm) (17.35 mgd) in the year 2030.

This maximum withdrawal rate from the Biscayne aquifer of 9.3 mgd continues with this permit modification due to the potential for saline water intrusion. Treatment of this water results in a finished production of 9.11 mgd. The balance of finished demand, to be met withdrawals from the Floridan aquifer system, is 8.24 mgd. Approximately 10.99 mgd of raw Floridan water is necessary to produce this finished volume.

Prior to completion of the reverse-osmosis treatment plant, estimated to be completed in 2018, additional treated water will be supplied through the MDWASD bulk-sales agreement. Once the reverse-osmosis treatment plant comes on-line, this additional quantity of water will be derived from the Floridan aquifer system. Exhibit 7 summarizes these demand calculations.

FLORIDAN AQUIFER IMPACT ASSESSMENT MODEL

In order to assess impacts from the proposed Floridan aquifer system withdrawals, the City submitted analytical modeling to define the area encompassed by the 1-foot drawdown contour. A Winflow groundwater flow model (Environmental Simulations, Inc. 1995) was used to simulate a Floridan aquifer system withdrawal of 12.0 mgd. The model was set up to simulate 10 wells, each withdrawing 833.3 gallons per minute (1.2 mgd or 160,428 cubic feet per day) for 90 days. Winflow is capable of simulating withdrawals from a single layer with a leaky confining unit which are conditions found in the upper Floridan aquifer in the project vicinity.

Aquifer coefficients obtained from an aquifer performance test conducted by the District in Hollywood (District C-13 Floridan aquifer testing site) were used for the model. These parameters were determined to be the most reliable aquifer coefficients in the area because they were calculated from a full-scale aquifer performance test. The following aquifer coefficients were established: Transmissivity, 24,064 feet-squared per day; storage coefficient, 0.0002; leakance, 0.00014 foot/day-foot.

Project Description

The modeling predicts the 1-foot drawdown contour extends approximately 6 miles from the center of the wellfield. Four Floridan aquifer wells owned by the City of North Miami Beach (Water Use Permit 13-00060-W) were identified within the cone of depression defined by the 1-foot drawdown contour. Maximum drawdown in the Floridan aquifer from the City's proposed pumpage is estimated to be about 27.5 feet below the background static water level (which is expected to be about 30 feet above sea level) at the wellfield and about 4 feet at the nearest North Miami Beach well (Exhibit 11C). It should be noted that these results are conservative, as the recommended maximum-monthly withdrawal rate from limit from the Floridan aquifer system is about 1.0 mgd less than the modeled withdrawal rate.

Impact Assessments

Water Resource Availability

Biscayne Aquifer

Per United States Geological Survey Water-Resources Investigations Report 90-4108, the base of the Biscayne aquifer is at approximately -160 feet National Geodetic Vertical Datum (NGVD). As part of the review for previous permit renewals analytical modeling was performed. Using the Theis analytical solution, a model scenario was conducted for 90 days and no recharge at the maximum pumping rate of 9.3 mgd. This modeling predicted a maximum drawdown within the wellfield of approximately 3 feet. This drawdown is quite conservative, as it does not include the recharge effects of rainfall, canals, and other surface water bodies. Water level data collected from the City's monitoring wells (F-275, F-279, G3224, G-894), located east of the wellfield, indicate that water levels range between +6 to +8 feet NGVD (Exhibits 10a-10d). Therefore, more than 160 feet of drawdown is available. Based upon historical water level data, the potential for harm to occur to water resource availability as a result of the recommended allocation is considered minimal.

Floridan Aquifer System

The top of the Floridan aquifer system occurs at about -1,000 feet NGVD. Maximum drawdown in the aquifer is estimated to be about 27.5 feet below the background static water level which is expected to be about 30 feet above sea level. Over 900 feet of drawdown will remain available. Therefore, the potential for harm to occur to the water resource availability of the aquifer as a result of the withdrawal of the recommended allocation is considered minimal.

Existing Legal Users

Biscayne Aquifer

The nearest existing legal user of the Biscayne aquifer is Brothers & Sons Service Station (13-00570-W), located about 550 feet to the southwest of the western-most City of North Miami Beach production well. Previous modeling indicates that a maximum of about 3 feet of drawdown could occur at this location as a result of the maximum pumpage from the City's Biscayne aquifer wells. The City has been pumping at a rate close to this maximum for more than 10 years with no reported problems from any existing legal users in the area. The potential for harm to occur to existing legal users as a result of the withdrawal of the recommended allocation is considered minimal.

Floridan Aquifer System

The nearest existing legal user of the Floridan aquifer system is the City of North Miami Beach (13-00060-W) The modeling indicates a maximum drawdown of about 4 feet could occur at the nearest City of North Miami Beach Floridan aquifer system well. This magnitude of drawdown is not expected to impact the ability of the City of North Miami Beach to withdraw water from the Floridan aquifer system consistent with their permit. Therefore, the potential for harm to occur to existing legal users as a result of the withdrawal of the recommended allocation is considered minimal.

Saline Water Intrusion

Biscayne Aquifer

The primary resource issue for this permittee is the potential for inducing saline water intrusion. As discussed previously, the City has historically been limited to a maximum withdrawal rate of 9.3 mgd in order to minimize the potential for saline water intrusion. The City has typically been operating it's wellfield at an average rate of about 7.5 to 8.7 mgd for about 25 years (Exhibit 8). The City's saline intrusion monitoring network has shown that chloride concentrations generally have not increased during this time period.

The Gratigny Monitor Well was installed as a condition of the previous permit and has been monitored for chlorides since 2002. This well is screened from 145-155 feet below land surface and is located about 8,000 feet to the east of the eastern-most Biscayne aquifer production well. This well was designed to intercept the top of the "salt water wedge" that occurs in the Biscayne aquifer in eastern Miami-Dade County. Since 2003, the chloride concentration in this well has trended between 800 and 1,600 milligrams per liter (mg/L). The higher chloride readings have occurred at the end of the dry season in the last three years (2008-2010).

In April 2001, saline water monitor Well F-279 (Exhibit 9D) showed an increase in chloride concentration, up to 3,600 mg/L, from the historic levels of 30 to 50 mg/L. Well F-279 is completed at a depth of 117 feet below land surface at the approximate base of the lower productive zone of the Biscayne aquifer. District files indicate that this well sustained some damage at the well head around this time. It is not known if this damage had any effect on chloride readings. It should also be noted that this time frame corresponds to the end of a significant drought in southern Florida. Chloride readings in this monitor well have been consistently measured in the 3,000 to 3,700 mg/L range since April 2001. Monitor Well F-279 is located about 1,000 feet east of the C-8 (Biscayne Canal) and about 9,000 feet due east of the wellfield. The C-8 Canal is held at an elevation of 1.8 to 2.1 feet NGVD by structure S-28, located downstream from this site.

The chloride data do not indicate a significant increase in movement of the saline water interface in the last ten years. However, the chloride data from well F-279, as well as the other chloride monitor wells, shall be monitored due to the proximity of the City's wells to the saline water interface. Chlorides in the remaining monitor wells and the eight production wells have remained consistently low, in the 30-60 mg/L range (Exhibits 9A-9M).

Limiting the withdrawal rate to the historical allocation, along with continued chloride and water level monitoring, should provide reasonable assurance that significant saline water intrusion will not occur.

Floridan Aquifer System

The upper Floridan aquifer of the Floridan aquifer system, as indicated by the chloride values in the District's C-13 aquifer performance test (1,000-1,200 foot interval), is saline with a chloride concentration of approximately 4,200 mg/L. The chloride concentration of water obtained in the aquifer performance test from the deeper middle Floridan aquifer zone (1,500-1,600 foot interval) was approximately 2,800 mg/L. Due to better water quality in the 1,500 to 1,600 foot zone, and the hydrologic separation from the saline water in the deeper lower Floridan aquifer, the potential for saline water intrusion due to upconing is considered minimal.

Wetlands

Biscayne Aquifer

There are no wetlands located within the cone of depression of the City's Biscayne aquifer wellfield. Therefore, the potential for harm to occur to wetlands as a result of the recommended allocation is considered minimal.

Floridan Aquifer System

The Floridan aquifer system is isolated from the surficial aquifer system's environmental features by the confining beds of the Hawthorn Formation. Therefore, the potential for harm to occur to wetlands as a result of the withdrawal of the recommended allocation is considered minimal.

Source Of Pollution

Biscayne Aquifer

This application is for the continuation of a previously permitted use of Biscayne aquifer water with no reported problems involving the induced movement of pollutants. Therefore, the potential for induced movement of pollutants to occur as a result of the recommended allocation is considered minimal.

Floridan Aquifer System

The Floridan aquifer system is isolated from the surficial aquifer system's environmental features by the confining beds of the Hawthorn Formation. Therefore, the potential for movement of contaminants, if present, from known pollution sources as a result of the withdrawal of the recommended allocation is considered minimal.

Other Impacts

Biscayne Aquifer

EXISTING OFFSITE LAND USES

Pursuant to Section 3.6.2 of the BOR, the use is not expected to result in significant reductions in water levels on the property of an existing off-site land use to the extent that the designed function of a water body and related surface water management improvements are damaged (not including aesthetic values), damage to agriculture, including damage resulting from reduction in soil moisture resulting from consumptive use; or land collapse or subsidence caused by reduction in water levels associated with consumptive use.

Additional Information

CONDITIONS OF ISSUANCE

Pursuant to Limiting Condition 17, the Permittee shall equip each facility with a District-approved operating water use accounting system and submit a report of calibration to the District, pursuant to Section 4.1 of the BOR. In addition, the Permittee shall submit a report of recalibration for the water use accounting system for each water withdrawal facility (existing and proposed) authorized under this permit every five years from each previous calibration, continuing at five-year increments.

Pursuant to Limiting Condition 18, monthly withdrawals for each withdrawal facility shall be submitted to the District quarterly. The water accounting method and means of calibration shall be stated on each report.

Pursuant to Limiting Condition 21, unaccounted-for distribution losses shall be determined for the entire distribution system on a monthly basis and reported to the District annually.

Pursuant to Limiting Condition 23, every ten years from the date of permit issuance, the permittee shall submit a water use compliance report for review and approval by District Staff, which addresses the results of a water conservation audit that documents the efficiency of water use on the project site using data produced from an onsite evaluation conducted and a comparison of the permitted allocation and the

Additional Information

allocation that would apply to the project based on current District allocation rules and updated population and per capita use rates.

WATER CONSERVATION

A: Permanent Irrigation Ordinance: The City is in the process of drafting and approving a Permanent Irrigation Ordinance. As per Limiting Condition 24, a permanent irrigation ordinance shall be adopted and effective no later than August 31, 2011.

B: Xeriscape Ordinance: The City is in the process of adopting a Florida Friendly Landscape Ordinance. As per Limiting Condition 24, this ordinance shall be adopted no later than August 31, 2011.

C: Ultra-Low Volume Plumbing Fixture Ordinance: North Miami Code Sec. 5-16. Adoption of Florida Building Code. The Florida Building Code, as adopted and amended by the state, shall be the building code for the city. (Ord. No. 1253, § 1, 4-8-08; Ord. No. 1262, § 1, 7-8-08)

D: Water Conservation Rate Structure: The City is conducting a study towards the adoption of a Tiered Water Conservation Rate Structure. As per Limiting Condition 24, a tiered Water Conservation Rate Structure shall be implemented no later than August 31, 2011.

E: Leak Detection Program: The City has provided The City has provided the following description of their leak detection program:

First a section of the distribution system is surveyed using Aqua 40 Loggers. The data from the logger are down loaded into Aqua 40 program, when a leak is detected the date is recorded. Next using correlation equipment the leak is located and recorded. That information is than passed on to the Distribution Department to be scheduled for repairs. When the leak is uncovered we visually estimate the gallons per minute, that information and the date repaired is recorded. Using this information the amount water lost is calculated.

F: Rain Sensor Device Ordinance: The City is currently revising their Land Development Regulations (Ordinance No. 1278, adopted April 28, 2009) to comply with current District criteria. As per Limiting Condition 24, the City shall adopt a Rain Sensor Ordinance by August 31, 2011.

G: Water Conservation Education Program: The City provides the following services; in-school programs, printed materials, public service announcements, AWWA Developed in-house.

H: Reclaimed Water: The City does not operate a wastewater treatment plant. The City will continue to explore water reuse opportunities with the SFWMD, MDWASD and the City of North Miami Beach.

MONITORING

Pursuant to Limiting Condition 28, the Permittee shall continue to submit monitoring data in accordance with the approved saline water intrusion monitoring program for this project. Water levels and chloride concentrations shall be monitored in wells F-275, F-279, G-3224, G-894, and the Gratigny Monitor Well. In addition, chloride concentrations shall be measured from each Biscayne aquifer production well and the facility at G-297. Data is to be collected monthly and submitted quarterly. The locations of these monitor wells are shown on Exhibit 3. Construction details are given in Exhibit 4.

WELLFIELD OPERATION

Wells 3 through 8 are monitored and controlled by the use of a telemetry system. Each well site is visually inspected and maintained on a daily basis. The combination of wells in operation fluctuates depending on

the demand. The schedule is set up to rotate down-time so each of Wells 3 through 8 are off approximately the same amount of time. Wells 1 & 2 are on continuously since they are the only wells that have back-up generator power.

MINIMUM FLOWS AND LEVELS (MFL)

Biscayne Aquifer -The Biscayne aquifer is an MFL water body covered under a prevention strategy set forth in Chapter 40E-8, F.A.C. The Biscayne aquifer MFL is defined as the water level which results in movement of the saltwater interface landward to the extent the water quality of an established withdrawal point is insufficient to serve as a water supply source. Consumptive use permit criteria for MFLs are located in Section 3.9 of the Water Use Basis of Review. The potential for westward movement of saline water resulting from the City's withdrawals was extensively evaluated for the previous permit issuance and it was determined that a daily maximum withdrawal rate limited to no greater than 9.3 mgd from the Biscayne aquifer should not induce the westward movement of saline water. Limiting future withdrawals from the Biscayne aquifer to 9.3 mgd provides assurances that the requested allocation should not violate the MFL criteria for the Biscayne aquifer. In addition, the Water Level and Water Quality Monitoring Network has been established to detect the movement of saline water towards the City's wellfield. In the event harmful saline water intrusion occurs as a result of the City's withdrawals despite the reasonable assurances provided, the City will be required to take remedial actions as per Limiting Condition 10. Therefore, the recommended allocation is consistent with the Biscayne aquifer MFL Prevention Plan.

Everglades -The Everglades is an MFL water body under a recovery plan under Rule 40E-8.421, F.A.C. Section 3.9 of the BOR contains criteria to be evaluated to determine consistency between requested allocations and the MFL recovery plan. Under Section 3.9.1.C of the BOR, the requested use meets the requirements of the section if the use is consistent with the recovery plan in the applicable regional water supply plan (LEC, 2005-2006). Section 3.2.1.E of the BOR is a component of the recovery strategy for MFLs for the Everglades. The recommended allocation from the Biscayne aquifer is consistent with criteria contained Section 3.2.1.E of the BOR. Therefore, the recommended allocation is consistent with the Everglades MFL Recovery Plan.

REGIONAL WATER AVAILABILITY

The City's Biscayne aquifer wellfield is located between District Canals C-6 and C-7, which are considered a part of the Lower East Coast Everglades Waterbodies. In order to assess whether or not the incremental additional allocation of 0.57 mgd beyond the calculated baseline condition could induce harmful seepage from either of these Waterbodies, pursuant to Section 3.2.1.E.2 of the BOR, an impact evaluation was conducted. The Theis (1935) analytical solution contained within the Winflow (Environmental simulations, Inc., 1995-2009) groundwater modeling software was utilized to demonstrate compliance with this criteria.

Drawdown contours resulting from this simulation are shown on Exhibit 11F. The net additional drawdown resulting from this withdrawal shows that the 0.1-foot drawdown ontour line does not extend into either of these Waterbodies. Section 1.7.5.2 of thr BOR considers a drawdown of 0.1 feet as the extent of the cone of influence. Therefore, the additional allocation, beyond the calculated baseline condition, does not cause a net increase in the volume or cause a change in timing on a monthly basis of water from District Canals C-6 or C-7 over the base condition water use that existed as of April 1, 2006.

PERMIT DURATION

Pursuant to Section 1.7.2 of the BOR, Staff recommends a 20-year permit duration.

Recommendations

Project Name:	CITY OF NORTH MIAMI
Application Number:	071012-6
Permit Number:	13-00059-W

Recommendations to Executive Director:

Staff recommends the modification and renewal of a Water Use Permit for public water supply for the City of North Miami Service Area. Withdrawals are from from the Biscayne aquifer via eight existing withdrawal facilities and from the Floridan aquifer system via 10 proposed withdrawal facilities. The use is reasonable-beneficial, will not interfere with any presently existing legal use of water and is consistent with the public interest. The use is further subject to 28 limiting conditions.

Application Reviewer: _____ Date: 8-17-10
John A. Lockwood, P.G.

Supervisor: _____ Date: 8/17/10
Steven J. Memberg, P.G.

Water Use Division: _____ Date: 8/17/10
James Harmon, P.G.

Limiting Conditions

1. This permit shall expire on August 23, 2030.

2. Application for a permit modification may be made at any time.

3. Water use classification:

   Public water supply

4. Source classification is:

   Ground Water from:
   Biscayne Aquifer
   Floridan Aquifer System

5. Annual allocation shall not exceed 6304 MG.

   Maximum monthly allocation shall not exceed 616.855 MG.

   The following limitations to annual withdrawals from specific sources are stipulated:
   Biscayne Aquifer-: 3,395 MG.
   Floridan Aquifer System-: 2,909 MG.

   The following limitations to maximum monthly withdrawals from specific sources are stipulated:
   Biscayne Aquifer-: 282.72 MG.
   Floridan Aquifer System-: 334.13 MG.

6. Pursuant to Rule 40E-1.6105, F.A.C., Notification of Transfer of Interest in Real Property, within 30 days of any transfer of interest or control of the real property at which any permitted facility, system, consumptive use, or activity is located, the permittee must notify the District, in writing, of the transfer giving the name and address of the new owner or person in control and providing a copy of the instrument effectuating the transfer, as set forth in Rule 40E-1.6107, F.A.C.

   Pursuant to Rule 40E-1.6107 (4), until transfer is approved by the District, the permittee shall be liable for compliance with the permit. The permittee transferring the permit shall remain liable for all actions that are required as well as all violations of the permit which occurred prior to the transfer of the permit.

   Failure to comply with this or any other condition of this permit constitutes a violation and pursuant to Rule 40E-1.609, Suspension, Revocation and Modification of Permits, the District may suspend or revoke the permit.

   This Permit is issued to:

   CITY OF NORTH MIAMI
   c/o MARK E. COLLINS
   776 NE 125 ST
   NORTH MIAMI, FL 33161

7. Withdrawal Facilities:

   Ground Water - Existing:

   1 - 12" X 124' X 1500 GPM Well Cased To 100 Feet
   1 - 12" X 62' X 1100 GPM Well Cased To 52 Feet

Limiting Conditions

1 - 12" X 107' X 1100 GPM Well Cased To 99 Feet
1 - 12" X 60' X 1500 GPM Well Cased To 45 Feet
1 - 12" X 56' X 1100 GPM Well Cased To 45 Feet
1 - 12" X 60' X 1100 GPM Well Cased To 50 Feet
1 - 12" X 104' X 1500 GPM Well Cased To 90 Feet
1 - 12" X 65' X 1500 GPM Well Cased To 57 Feet

Ground Water - Proposed:

10 - 16" X 1250' X 2500 GPM Wells Cased To 1000 Feet

8. Permittee shall mitigate interference with existing legal uses that was caused in whole or in part by the permittee's withdrawals, consistent with the approved mitigation plan. As necessary to offset the interference, mitigation will include pumpage reduction, replacement of the impacted individual's equipment, relocation of wells, change in withdrawal source, or other means.

   Interference to an existing legal use is defined as an impact that occurs under hydrologic conditions equal to or less severe than a 1 in 10 year drought event that results in the:

   (1) Inability to withdraw water consistent with provisions of the permit, such as when remedial structural or operational actions not materially authorized by existing permits must be taken to address the interference; or

   (2) Change in the quality of water pursuant to primary State Drinking Water Standards to the extent that the water can no longer be used for its authorized purpose, or such change is imminent.

9. Permittee shall mitigate harm to existing off-site land uses caused by the permittee's withdrawals, as determined through reference to the conditions for permit issuance. When harm occurs, or is imminent, the District will require the permittee to modify withdrawal rates or mitigate the harm. Harm caused by withdrawals, as determined through reference to the conditions for permit issuance, includes:

   (1) Significant reduction in water levels on the property to the extent that the designed function of the water body and related surface water management improvements are damaged, not including aesthetic values. The designed function of a water body is identified in the original permit or other governmental authorization issued for the construction of the water body. In cases where a permit was not required, the designed function shall be determined based on the purpose for the original construction of the water body (e.g. fill for construction, mining, drainage canal, etc.)

   (2) Damage to agriculture, including damage resulting from reduction in soil moisture resulting from consumptive use; or

   (3) Land collapse or subsidence caused by reduction in water levels associated with consumptive use.

10. Permittee shall mitigate harm to the natural resources caused by the permittee's withdrawals, as determined through reference to the conditions for permit issuance. When harm occurs, or is imminent, the District will require the permittee to modify withdrawal rates or mitigate the harm. Harm, as determined through reference to the conditions for permit issuance includes:

    (1) Reduction in ground or surface water levels that results in harmful lateral movement of the fresh water/salt water interface,

(2) Reduction in water levels that harm the hydroperiod of wetlands,

(3) Significant reduction in water levels or hydroperiod in a naturally occurring water body such as a lake or pond,

(4) Harmful movement of contaminants in violation of state water quality standards, or

(5) Harm to the natural system including damage to habitat for rare or endangered species.

11. If any condition of the permit is violated, the permit shall be subject to review and possible modification, enforcement action, or revocation.

12. Authorized representatives of the District shall be permitted to enter, inspect, and observe the permitted system to determine compliance with special conditions.

13. The Permittee is advised that this permit does not relieve any person from the requirement to obtain all necessary federal, state, local and special district authorizations.

14. The permit does not convey any property right to the Permittee, nor any rights and privileges other than those specified in the Permit and Chapter 40E-2, Florida Administrative Code.

15. Permittee shall submit all data as required by the implementation schedule for each of the limiting conditions to: SFWMD, Environmental Resource Compliance, P.O. Box 24680, West Palm Beach, FL 33416-4680.

16. In the event of a declared water shortage, water withdrawal reductions will be ordered by the District in accordance with the Water Shortage Plan, Chapter 40E-21, F.A.C. The Permittee is advised that during a water shortage, pumpage reports shall be submitted as required by Chapter 40E-21, F.A.C.

17. Prior to the use of any proposed water withdrawal facility authorized under this permit, unless otherwise specified, the Permittee shall equip each facility with a District-approved operating water use accounting system and submit a report of calibration to the District, pursuant to Section 4.1, Basis of Review for Water Use Permit Applications.

    In addition, the Permittee shall submit a report of recalibration for the water use accounting system for each water withdrawal facility (existing and proposed) authorized under this permit every five years from each previous calibration, continuing at five-year increments.

18. Monthly withdrawals for each withdrawal facility shall be submitted to the District quarterly. The water accounting method and means of calibration shall be stated on each report.

19. The Permittee shall notify the District within 30 days of any change in service area boundary. If the Permittee will not serve a new demand within the service area for which the annual allocation was calculated, the annual allocation may then be subject to modification and reduction.

20. The Permittee shall notify the District within 30 days of entry into an inter-local agreement, contract, or other similar instrument to deliver or receive water outside of its service area or to serve a demand not identified to determine the allocation described in this permit. A copy of such agreement shall be provided to the District. The monthly volume of water delivered and/or received via each inter-local agreement, contract, or other similar instrument shall be submitted to the District on a quarterly basis.

21. Permittee shall determine unaccounted-for distribution system losses. Losses shall be determined for the entire distribution system on a monthly basis. Permittee shall define the manner in which unaccounted-for losses are calculated. Data collection shall begin within six months of Permit issuance. Loss reporting shall be submitted to the District on a yearly basis from the date of Permit issuance.

22. Permittee shall maintain an accurate flow meter at the intake of the water treatment plant for the purpose of measuring daily inflow of water.

23. Every ten years from the date of permit issuance, the permittee shall submit a water use compliance report for review and approval by District Staff, which addresses the following:

    1. The results of a water conservation audit that documents the efficiency of water use on the project site using data produced from an onsite evaluation conducted. In the event that the audit indicates additional water conservation is appropriate or the per capita use rate authorized in the permit is exceeded, the permittee shall propose and implement specific actions to reduce the water use to acceptable levels within timeframes proposed by the permittee and approved by the District.

    2. A comparison of the permitted allocation and the allocation that would apply to the project based on current District allocation rules and updated population and per capita use rates. In the event the permit allocation is greater than the allocation provided for under District rule, the permittee shall apply for a letter modification to reduce the allocation consistent with District rules and the updated population and per capita use rates to the extent they are considered by the District to be indicative of long term trends in the population and per capita use rates over the permit duration. In the event that the permit allocation is less than allowable under District rule, the permittee shall apply for a modification of the permit to increase the allocation if the permittee intends to utilize an additional allocation, or modify its operation to comply with the existing conditions of the permit.

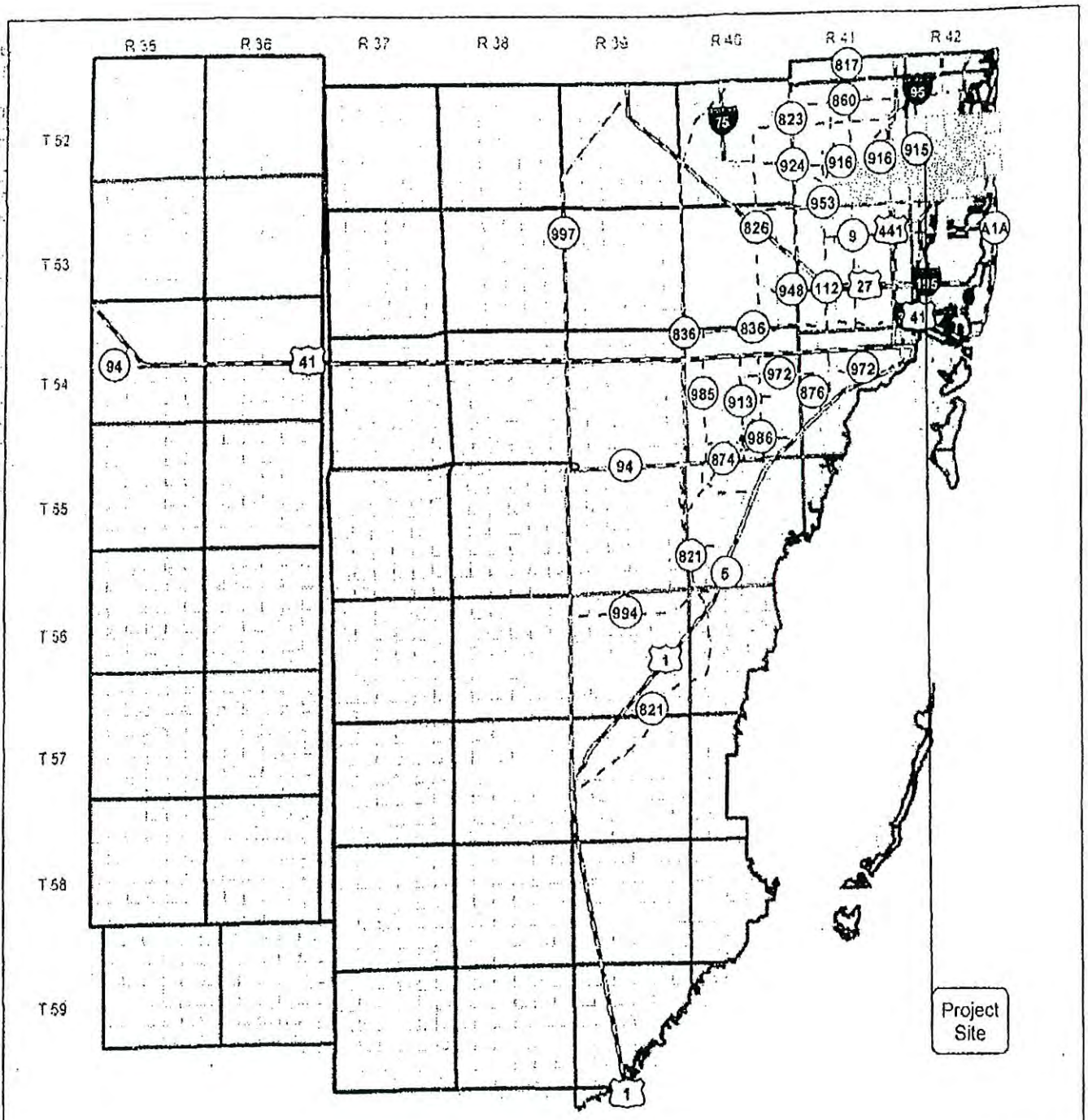
24. The Water Conservation Plan required by Section 2.6.1 of the Basis of Review for Water Use Permit Applications within the South Florida Water Management District, must be implemented in accordance with the approved implementation schedule.

25. If a proposed well location is different from a location specified in the application, the Permittee shall submit to the District an evaluation of the impact of pumpage from the proposed well location on adjacent existing legal uses, pollution sources, environmental features, the saline water interface, and water bodies one month prior to all new well construction. The Permittee is advised that the proposal must be in compliance with all permitting criteria and performance standards in effect at the time of submittal, and that a formal modification of the permit shall be required if the withdrawals from the well location will result in an environmental or resource impact significantly greater than that anticipated in the permit review process.

26. If at any time there is an indication that the well casing, valves, or controls leak or have become inoperative, repairs or replacement shall be made to restore the system to an operating condition. Failure to make such repairs shall be cause for filling and abandoning the well, in accordance with procedures outlined in Chapters 40E-3 and 40E-30, Florida Administrative Code.

27. The Permittee shall submit to the District an updated Well Description Table (Table A) within one month of completion of the proposed wells identifying the actual total and cased depths, pump manufacturer and model numbers, pump types, intake depths and type of meters.

28. The Permittee's monitoring plan shall be implemented as follows:
    Continue to record water levels and chloride concentrations in Monitor wells F-275, F-279, G-3224, G-894, and the Gratigny Monitor Well. Record chloride concentrations in each Biscayne aquifer production well and Facility @ G-297 (121 & 4th). The locations of these monitor wells are shown on Exhibit 3. Construction details are shown on Exhibit 4.



MIAMI-DADE COUNTY, FLORIDA

Legend

Application

Application Sections

Application Number: 071012-6

Permit Number: 13-00059-W

Project Name: CITY OF NORTH MIAMI

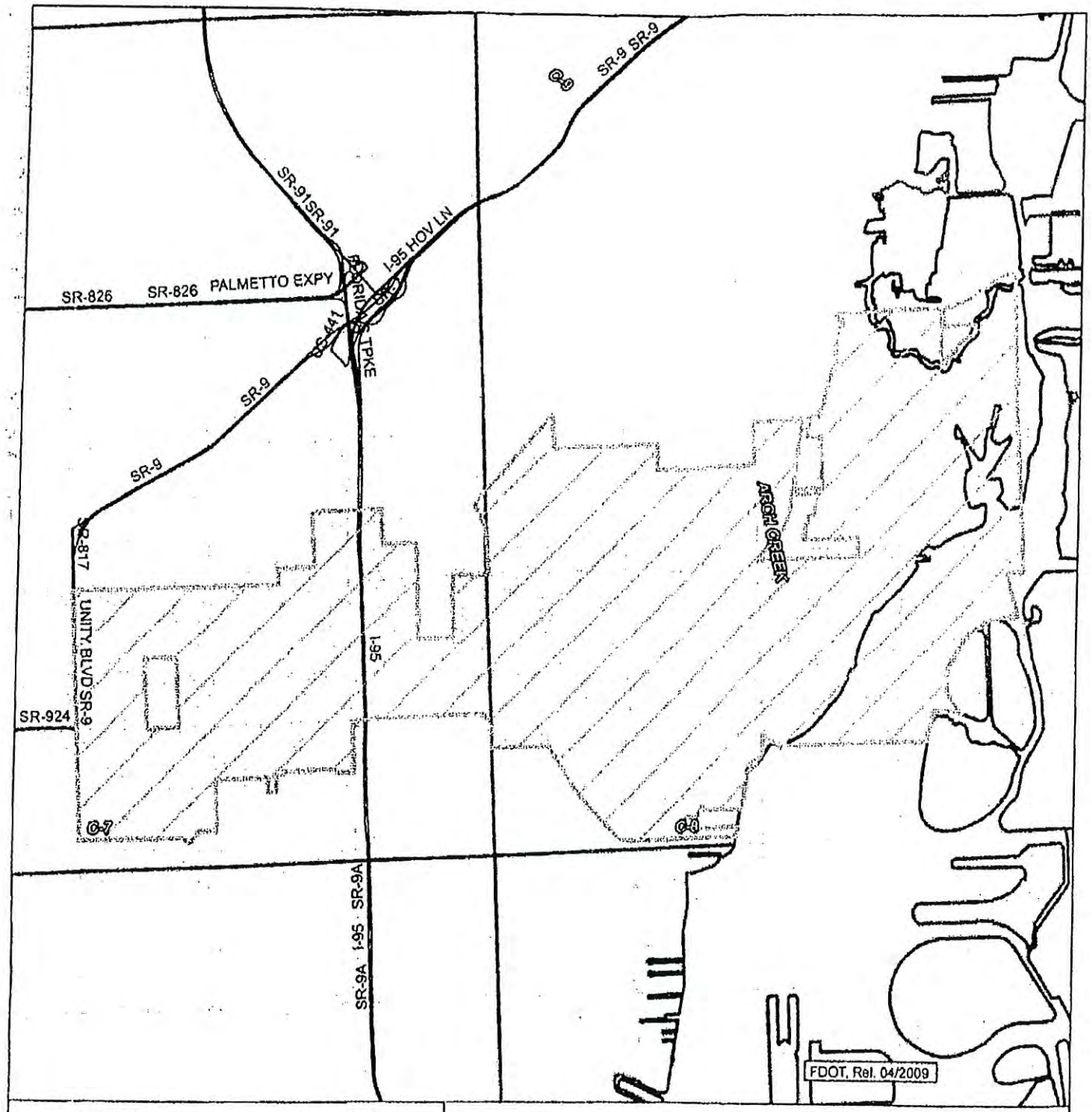
N

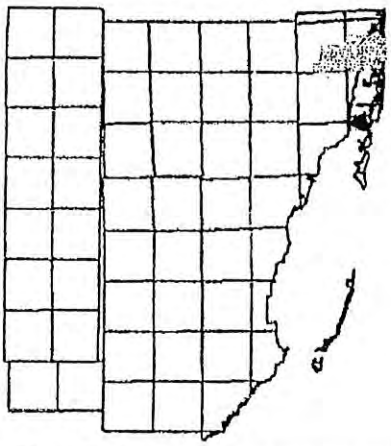
Map Date: 6/18/2010

0 5 10

Miles

Exhibit : 1





MIAMI-DADE COUNTY, FLORIDA

N

Legend

Application

Map Date: 6/18/2010

Application Number: 071012-6

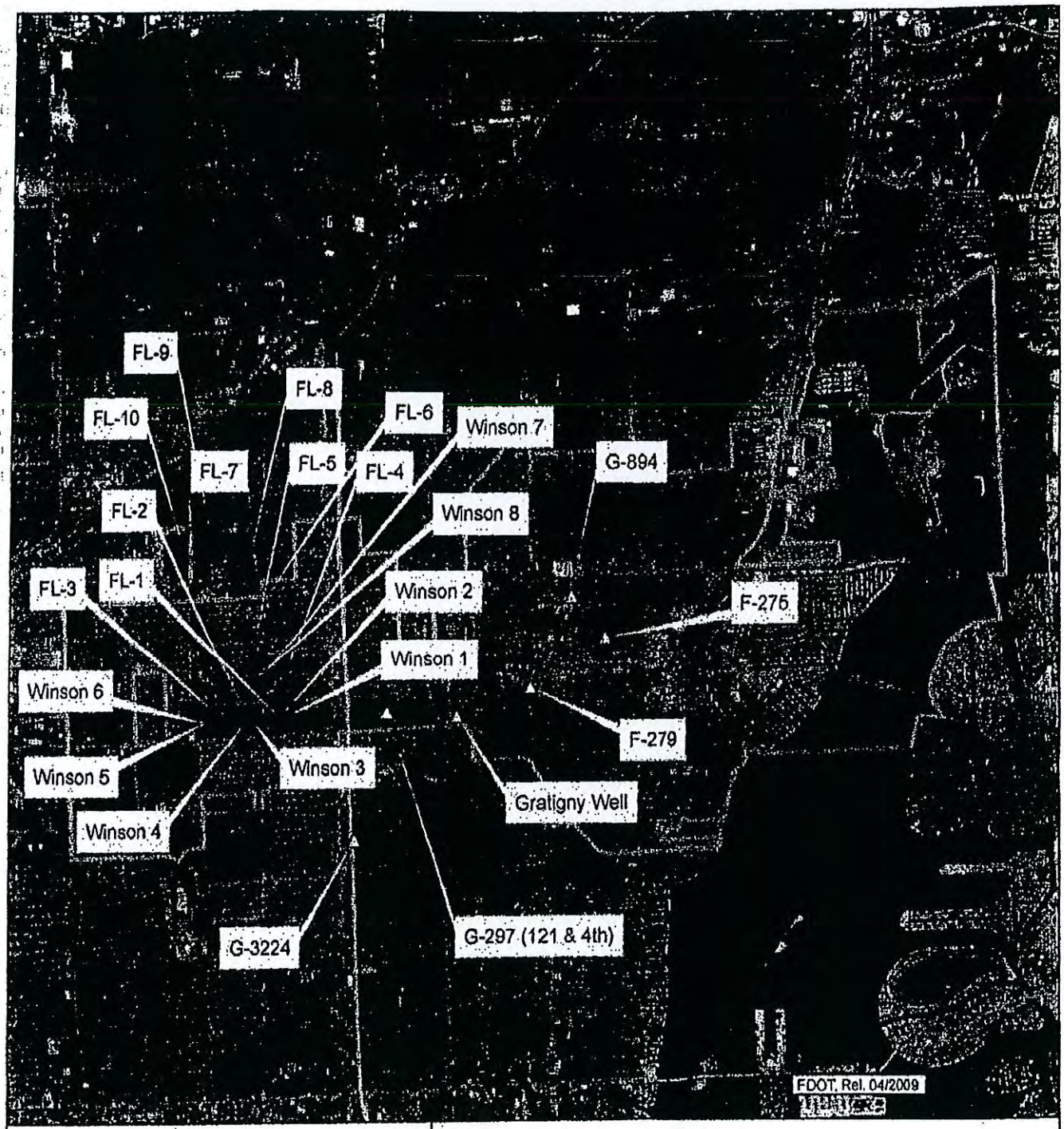
Permit Number: 13-00059-W

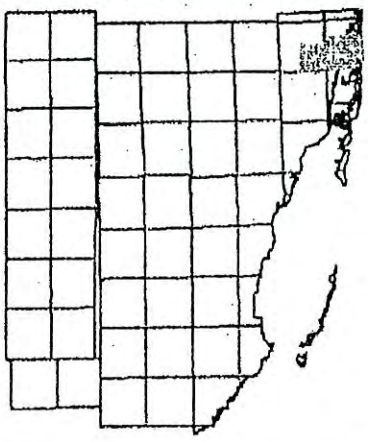
Project Name: CITY OF NORTH MIAMI

0 1.25 2.5

Miles

Exhibit : 2





MIAMI-DADE COUNTY, FLORIDA

Application

△ Monitor Wells

FAS Wells

Biscayne Aquifer Wells

N

Application Number: 071012-6

Permit Number: 13-00059-W

Project Name: CITY OF NORTH MIAMI

Map Date: 6/17/2010

0 1.25 2.5

Miles

Exhibit : 3

TABLE - A
Description Of Wells.

Application Number: 071012-6

Well ID	45234	45237	45238	45239	45240	45241
Name	Winson 1	Winson 2	Winson 3	Winson 4	Winson 5	Winson 6
Map Designator	1	2	3	4	5	6
FLUWID Number						
Well Field						
Existing/Proposed	E	E	E	E	E	E
Well Diameter(Inches)	12	12	12	12	12	12
Total Depth(feet)	124	104	60	65	107	56
Cased Depth(feet)	100	90	45	57	99	45
Facility Elev. (ft. NGVD)						
Screened Interval						
From	0	0	0	0	0	0
To	0	0	0	0	0	0
Pumped Or Flowing	P	P	P	P	P	P
Pump Type	turbine	turbine	submersible	submersible	submersible	submersible
Pump Int. Elev.						
Feet (NGVD)						
Feet (BLS)	-30	-25	-25	-27	-27	-27
Pump Capacity(GPM)	1500	1500	1500	1500	1100	1100
Year Drilled	1962	1962	1962	1962	1962	1962
Planar Location						
Source	REVIEWER	REVIEWER	REVIEWER	REVIEWER	REVIEWER	REVIEWER
Feet East	913699	913536	912425	912235	910988	910789
Feet North	564780	564851	564711	564720	564772	564562
Accounting Method	flow meter	flow meter	flow meter	flow meter	flow meter	flow meter
Use Status	Primary	Primary	Primary	Primary	Primary	Primary
Water Use Type	Public Water Supply Monitor	Public Water Supply Monitor	Public Water Supply Monitor	Public Water Supply Monitor	Public Water Supply Monitor	Public Water Supply Monitor
Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer

Exhibit No: 4

TABLE - A

Description Of Wells.

Application Number: 071012-6

Well ID	45242	45243	137484	137485	137486	137487
Name	Winson 7	Winson 8	F-275	F-279	G-3224	G-894
Map Designator	7	8				
FLUWID Number						
Well Field						
Existing/Proposed	E	E	E	E	E	E
Well Diameter(Inches)	12	12	4	6	2	2
Total Depth(feet)	60	62	50.8	115.3	19.2	74.15
Cased Depth(feet)	50	52				
Facility Elev. (ft. NGVD)						
Screened Interval						
From	0	0				
To	0	0				
Pumped Or Flowing	P	P				
Pump Type	submersible	submersible	none	none	none	none
Pump Int. Elev.						
Feet (NGVD)						8.78
Feet (BLS)	-27	-27				
Pump Capacity(GPM)	1100	1100	0	0	0	0
Year Drilled	1962	1962				
Planar Location						
Source	REVIEWER	REVIEWER				
Feet East	912446	912115	925260.8	923308.3	916485	924885.208
Feet North	565906	565914	567787.7	565901.8	560276.4	569334.439
Accounting Method	flow meter	flow meter	none	none	none	none
Use Status	Primary	Primary	Monitor	Monitor	Monitor	Monitor
Water Use Type	Public Water Supply Monitor	Public Water Supply Monitor	Monitor	Monitor	Monitor	Monitor Water Shortage Monitoring Facility
Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer

Exhibit No. 4

TABLE - A
Description Of Wells.

Application Number: 071012-6

Well ID	137489	153705	255446	255447	255448	255449
Name	Gratigny Well	G-297 (121 & 4th)	FL-1	FL-2	FL-3	FL-4
Map Designator	Gratigny		F-1	F-2	F-3	F-4
FLUWID Number						
Well Field						
Existing/Proposed	E	E	P	P	P	P
Well Diameter(inches)	2	2	16	16	16	16
Total Depth(feet)	154.35	107.6	1250	1250	1250	1250
Cased Depth(feet)			1000	1000	1000	1000
Facility Elev. (ft. NGVD)						
Screened Interval From						
To						
Pumped Or Flowing			P	P	P	P
Pump Type	none	none	submersible	submersible	submersible	submersible
Pump Int. Elev. Feet (NGVD)						
Feet (BLS)						
Pump Capacity(GPM)	0	0	2500	2500	2500	2500
Year Drilled						
Planar Location Source						
Feet East	920419.6	917715.3	913535	912270	910960	913655
Feet North	564833.9	564979	564765	564825	564765	566230
Accounting Method	none	none	totalizer	totalizer	totalizer	totalizer
Use Status	Monitor	Monitor	Primary	Primary	Primary	Primary
Water Use Type	Monitor	Monitor	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply
Aquifer	Biscayne Aquifer	Aquifer Unspecified	Floridan Aquifer System	Floridan Aquifer System	Floridan Aquifer System	Floridan Aquifer System

Exhibit No: 4

TABLE - A
Description Of Wells.

Application Number: 071012-6

Well ID	255456	255457	255458	255459	255460	255461
Name	FL-5	FL-6	FL-7	FL-8	FL-9	FL-10
Map Designator	F-5	FL-6	F-7	F-8	F-9	F-10
FLUWID Number						
Well Field						
Existing/Proposed	P	P	P	P	P	P
Well Diameter(Inches)	16	16	16	16	16	16
Total Depth(feet)	1250	1250	1250	1250	1250	1250
Cased Depth(feet)	1000	1000	1000	1000	1000	1000
Facility Elev. (ft. NGVD)						
Screened Interval From						
To						
Pumped Or Flowing	P	P	P	P	P	P
Pump Type	submersible	submersible	submersible	submersible	submersible	submersible
Pump Int. Elev. Feet (NGVD)						
Feet (BLS)						
Pump Capacity(GPM)	2500	2500	2500	2500	2500	2500
Year Drilled						
Planar Location Source						
Feet East	912165	912730	912690	912110	911220	910200
Feet North	566010	568982	568982	569825	569725	569745
Accounting Method	totalizer	totalizer	totalizer	totalizer	totalizer	totalizer
Use Status	Secondary	Primary	Primary	Primary	Primary	Primary
Water Use Type	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply
Aquifer	Floridan Aquifer System	Floridan Aquifer System	Floridan Aquifer System	Floridan Aquifer System	Floridan Aquifer System	Floridan Aquifer System

Exhibit No. 4

PERMIT_NO	13-00059-W	13-00059-W
Permit name	North Miami	North Miami
fac grp name	North Miami	North Miami
Source	Biscayne Aquifer	[redacted]
Apr-01	205.50	
May-01	206.51	largest value
Jun-01	191.80	3185.39
Jul-01	195.68	largest value mgd
Aug-01	202.97	6.73
Sep-01	209.40	dates
Oct-01	213.26	Aug-02
Nov-01	228.99	Jul-03
Dec-01	232.12	
Jan-02	209.71	
Feb-02	198.21	
Mar-02	264.43	2558.58
Apr-02	267.74	2620.32
May-02	268.30	2682.61
Jun-02	239.69	2730.50
Jul-02	266.41	2801.23
Aug-02	275.32	2873.58
Sep-02	262.29	2926.47
Oct-02	285.51	2998.72
Nov-02	263.05	3032.78
Dec-02	254.91	3055.57
Jan-03	254.03	3099.89
Feb-03	243.81	3145.49
Mar-03	265.21	3146.27
Apr-03	275.22	3153.75
May-03	274.71	3160.16
Jun-03	261.19	3101.66
Jul-03	270.14	3185.39
Aug-03	264.67	3174.74
Sep-03	254.86	3187.31
Oct-03	260.12	3141.92
Nov-03	250.24	3129.11
Dec-03	258.20	3132.40
Jan-04	247.75	3126.12
Feb-04	228.79	3111.10
Mar-04	255.05	3100.94
Apr-04	247.16	3072.88
May-04	262.09	3060.26
Jun-04	257.84	3056.91
Jul-04	262.73	3049.49
Aug-04	266.04	3050.66
Sep-04	229.03	3025.03
Oct-04	245.28	3010.16
Nov-04	246.46	3006.41
Dec-04	268.02	3018.23
Jan-05	264.41	3032.09
Feb-05	243.26	3047.36
Mar-05	276.47	3068.77
Apr-05	269.89	3091.51
May-05	281.30	3110.72
Jun-05	262.24	3115.12
Jul-05	274.71	3127.10
Aug-05	268.88	3129.34
Sep-05	249.00	3149.91
Oct-05	243.29	3147.92
Nov-05	252.75	3154.21
Dec-05	269.60	3155.79
Jan-06	254.69	3146.07
Feb-06	248.08	3150.89
Mar-06	250.89	3125.32
Apr-06	252.70	3108.13
May-06	252.20	3079.02
Jun-06	218.03	3035.81
Jul-06	248.38	3009.47
Aug-06	241.35	2981.94
Sep-06	265.15	2995.09
Oct-06	255.71	3010.51
Nov-06	191.11	2948.86
Dec-06	230.47	2909.73

EXHIBIT 5

City of North Miami Water Use Permit (SFWMD)
Per Capita Use Per MORs and MDWASD (Fin. Water)

	2005	2006	2007	2008*	2009	Average 2005 - 2009
Population in Service Area**	88,732	89,429	90,125	90,586	91,401	90,055
Per Capita Usage (Annual Average) (gpcd)	145.59	147.31	142.94	132.02	129.12	139.40
Total Annual Use (Finished Water- From Winson WTP) (MG)	3172.447	2923.192	2823.412	2393.035	2905.909	2843.599
Total Annual Use (Finished Water- From MDWASD) (MG)	1542.903	1885.33	1878.664	1983.912	1413.62	1740.89
Total Annual Use (Finished Water- Total) (MG)	4715.350	4808.522	4702.076	4376.947	4319.533	4584.486
Average Month Use (Finished Water- From Winson WTP) (MG)	264.371	243.599	235.284	199.420	242.159	236.967
Average Month Use (Finished Water- From MDWASD) (MG)	128.575	157.111	156.555	165.326	117.802	145.074
Average Month Use (Finished Water- Total) (MG)	392.946	400.710	391.839	364.746	359.961	382.040
Max Month Usage (Finished Water- From Winson WTP) (MG)	279.399	268.230	269.184	217.312	253.163	257.458
Max Month Usage (Finished Water- From MDWASD) (MG)	147.964	208.281	190.656	222.462	146.969	183.267
Max Month Usage (Finished Water- Total) (MG)	427.363	476.511	459.840	439.774	400.132	440.724
Ratio Max:Average (Finished Water- From Winson WTP)	1.06	1.10	1.14	1.09	1.05	1.09
Ratio Max:Average (Finished Water- From Winson WTP)	1.15	1.33	1.22	1.35	1.25	1.26
Ratio Max:Average (Finished Water- From Winson WTP)	1.09	1.19	1.17	1.21	1.11	1.15

* Leap Year

** Population Based on Interpolation of Data from Nmpopulationworksheet New Setvice Area

EXHIBIT 6A

North Miami Service Area Average Day Water Demand Projections (Showing Treatment Losses)																					
Calendar Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Projected Population in Service Area (in thousands)	92.22	93.03	93.84	94.66	95.47	96.29	97.1	97.92	98.73	99.55	100.36	101.18	101.99	102.81	103.4	104.21	105.02	105.83	106.64	107.46	108.27
Total Finished Water Per Capita (gpcd)	139.40	139.40	139.40	139.40	139.40	139.40	139.40	139.40	139.40	139.40	139.40	139.40	139.40	139.40	139.40	139.40	139.40	139.40	139.40	139.40	139.40
Total Finished Water Demand (MGD)	12.86	12.97	13.08	13.20	13.31	13.42	13.54	13.65	13.76	13.88	13.99	14.10	14.22	14.33	14.41	14.53	14.64	14.75	14.87	14.98	15.09
Total Finished Water Production Capacity (MGD)	9.11	9.11	9.11	9.11	9.11	9.11	9.11	9.11	13.76	13.88	13.99	14.10	14.22	14.33	14.41	14.53	14.64	14.75	14.87	14.98	15.09
Finished Water Purchased from MDWASD (MGD)	3.74	3.85	3.97	4.08	4.19	4.31	4.42	4.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Biscayne Aquifer																					
Total Lime Softened Finished Water Produced (MGD)	9.11	9.11	9.11	9.11	9.11	9.11	9.11	9.11	9.11	9.11	9.11	9.11	9.11	9.11	9.11	9.11	9.11	9.11	9.11	9.11	9.11
Losses from Treatment (%)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Lime Softened Treatment Losses (MGD)	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Biscayne Raw Water Demand (MGD)	9.30	9.30	9.30	9.30	9.30	9.30	9.30	9.30	9.30	9.30	9.30	9.30	9.30	9.30	9.30	9.30	9.30	9.30	9.30	9.30	9.30
Floridan Aquifer																					
Total Membranse Treated Finished Water Produced (MGD)	0	0	0	0	0	0	0	0	4.65	4.76	4.88	4.99	5.10	5.22	5.30	5.41	5.53	5.64	5.75	5.87	5.98
Losses from Treatment (%)	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Losses from Treatment (MGD)	0	0	0	0	0	0	0	0	1.55	1.59	1.63	1.66	1.70	1.74	1.77	1.80	1.84	1.88	1.92	1.96	1.99
Floridan Raw Water Demand (MGD)	0	0	0	0	0	0	0	0	6.20	6.35	6.50	6.65	6.80	6.96	7.07	7.22	7.37	7.52	7.67	7.82	7.97
Raw Water (Biscayne + Floridan Aquifers) Totals*																					
Total Finished Water Demand (Biscayne + Floridan Aquifers) - Does not include MDWASD Supply	9.11	9.11	9.11	9.11	9.11	9.11	9.11	9.11	13.76	13.88	13.99	14.10	14.22	14.33	14.41	14.53	14.64	14.75	14.87	14.98	15.09
Total Losses From Treatment (MGD)	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	1.74	1.77	1.81	1.85	1.89	1.93	1.95	1.99	2.03	2.07	2.10	2.14	2.18
Total Raw Water Demand from Combined Sources (MGD)	9.30	9.30	9.30	9.30	9.30	9.30	9.30	9.30	15.50	15.65	15.80	15.95	16.10	16.26	16.37	16.52	16.67	16.82	16.97	17.12	17.27

Legend:

Year 2018 – WTP expansion and Floridan Wells on line
Years 2012, 2016, 2020 and 2024 are leap years
* Does not include MDWASD Source Water

EXHIBIT 6B

PROJECTED MAXIMUM-MONTHLY ALLOCATION CALCULATION

ALL VALUES IN MGD

TOTAL FINISHED WATER DEMAND	15.09	
MAX-MONTH FINISHED DEMAND	17.3535	15.09x1.15=17.3535

17.3535 MGD TO BE DERIVED AS FOLLOWS:

BISCAYNE AQUIFER

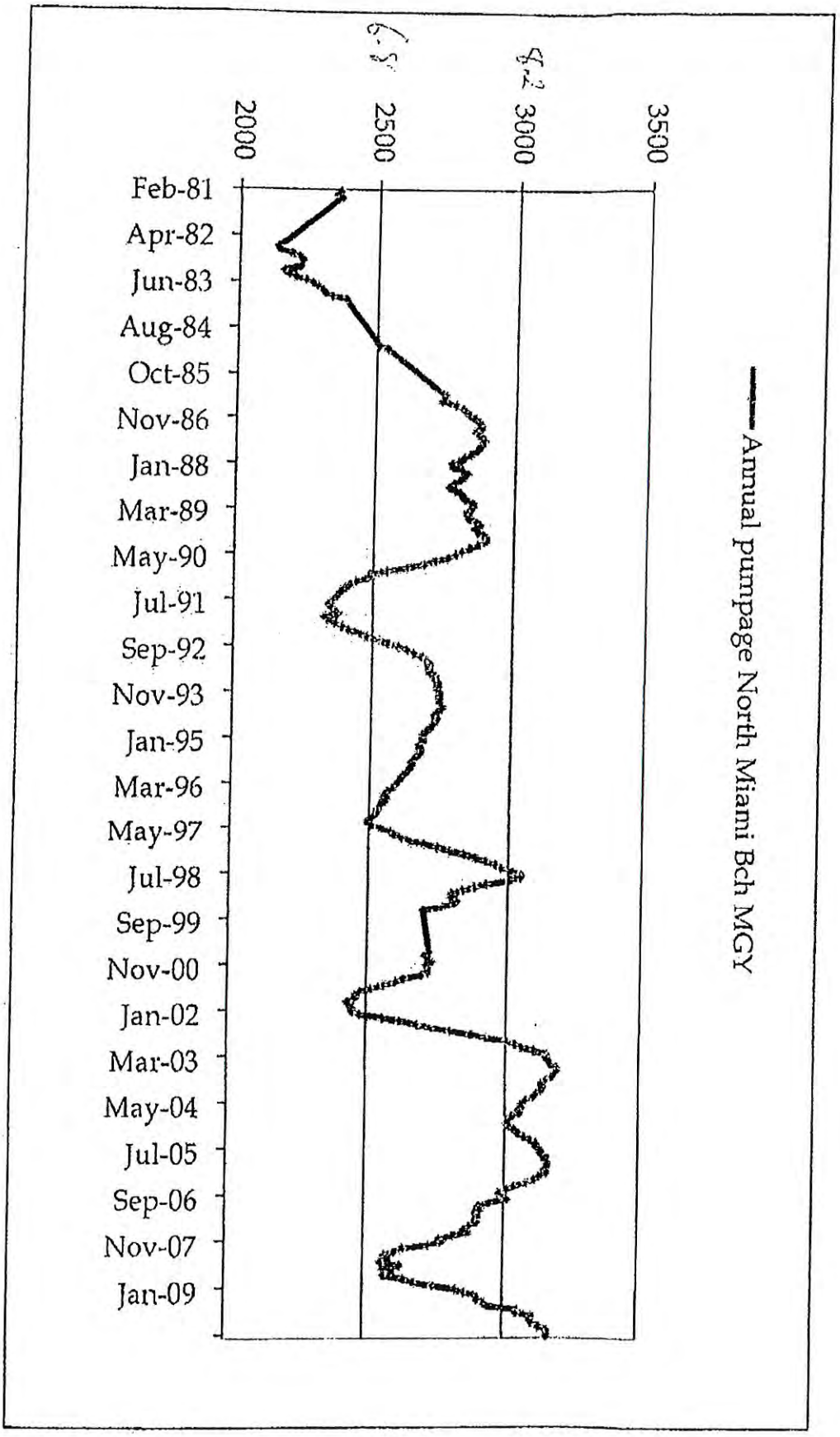
FINISHED WATER	9.11	(9.3x0.98) - (98% TREATMENT EFFICIENCY)
RAW WATER (SOURCE LIMITED)	9.3	

FLORIDAN AQUIFER

(REMAINING DEMAND FROM FLORIDAN)	8.2435	
FINISHED WATER	8.2435	(17.3535-9.11=8.2435) - 75% TREATMENT EFFICIENCY)
RAW WATER	10.9913	(8.2435/0.75)=10.9913 - RAW WATER DEMAND

EXHIBIT 7

EXHIBIT 8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Jul-98
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Jan-02
Mar-03
May-04
Jul-05
Sep-06
Nov-07
Jan-09
Annual pumpage North Miami Bch MGY

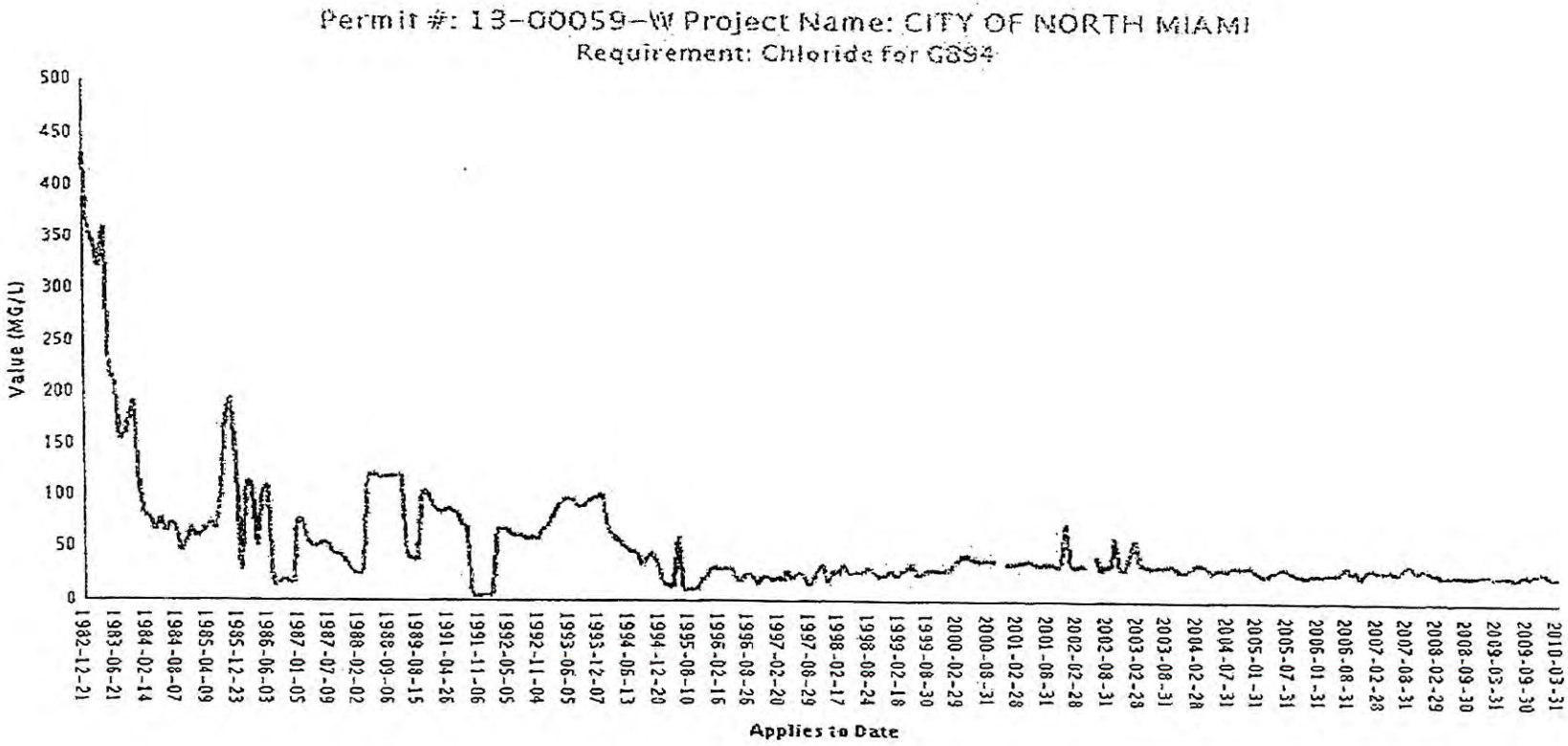
Permit #: 13-00059-W Project Name: CITY OF NORTH MIAMI
Requirement: Chloride for G894
Value (MG/L)
500
450
400
350
300
250
200
150
100
50
0
1982-12-21
1983-06-21
1984-02-14
1984-08-07
1985-04-09
1985-12-23
1986-06-03
1987-01-05
1987-07-09
1988-02-02
1988-09-06
1989-08-15
1991-04-26
1991-11-06
1992-05-05
1992-11-04
1993-06-05
1993-12-07
1994-06-13
1994-12-20
1995-08-10
1996-02-16
1996-08-26
1997-02-20
1997-08-29
1998-02-17
1998-08-24
1999-02-18
1999-08-30
2000-02-29
2000-08-31
2001-02-28
2001-08-31
2002-02-28
2002-08-31
2003-02-28
2003-08-31
2004-02-28
2004-07-31
2005-01-31
2005-07-31
2006-01-31
2006-08-31
2007-02-28
2007-08-31
2008-02-29
2008-09-30
2009-03-31
2009-09-30
2010-03-31
Applies to Date

EXHIBIT 9A

Permit #: 13-00059-W Project Name: CITY OF NORTH MIAMI
Requirement: Chloride for G3224
Value (MG/L)
100
80
60
40
20
0
Applies to Date
2010-02-28
2009-09-30
2009-04-30
2008-11-30
2008-06-30
2008-01-31
2007-08-31
2007-03-31
2006-10-31
2006-04-30
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2004-08-31
2004-03-31
2003-10-31
2003-05-30
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2000-05-31
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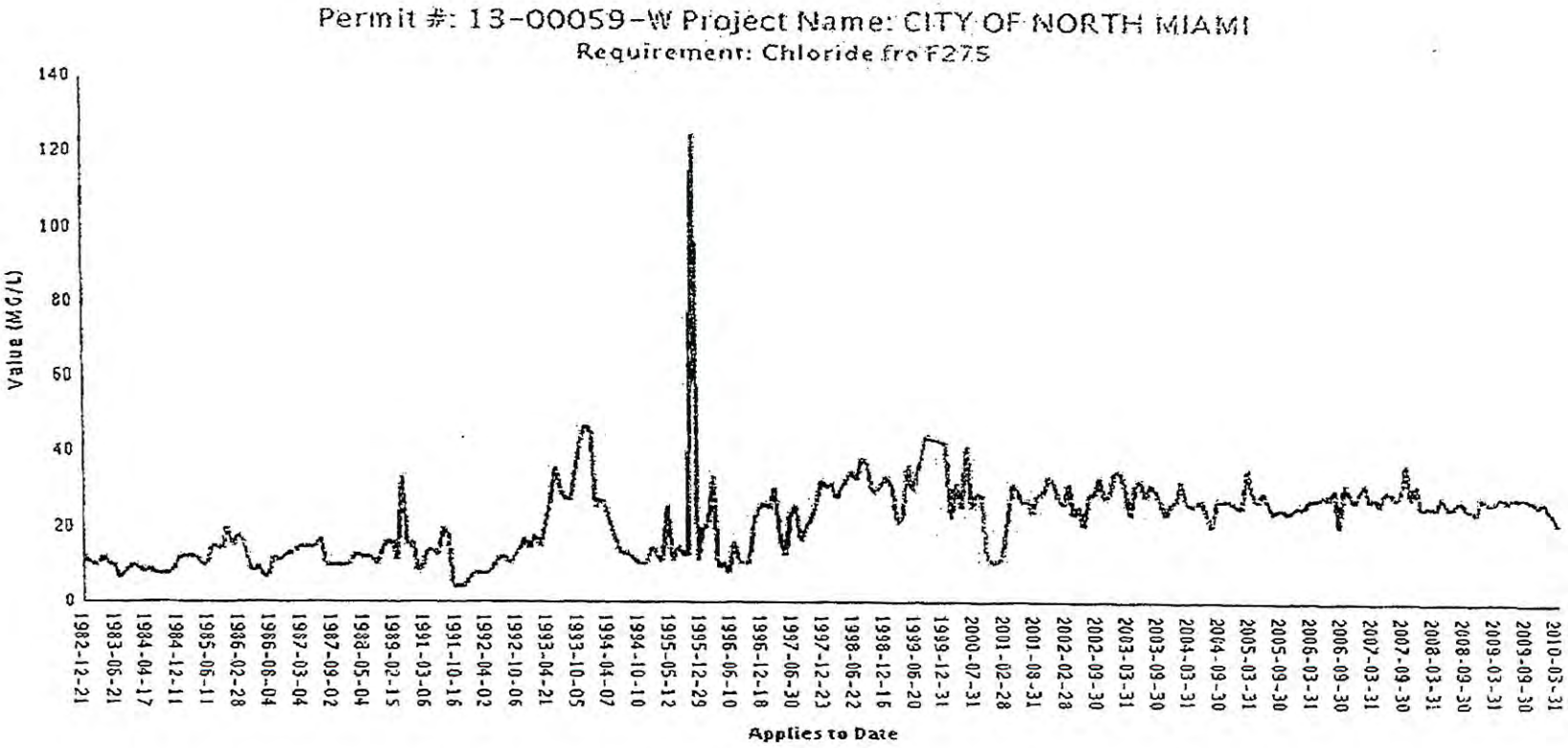
1999-07-22
1999-02-18
1998-09-22
1998-04-28
1997-11-28
1997-06-30
1997-01-13
1996-08-26
1996-03-13
1995-10-16
1995-04-13
1994-10-10
1994-05-18
1993-12-07
1993-07-19
1993-02-08
1992-08-20
1992-03-10
1991-10-16
1991-04-26
1989-10-15
1986-10-10
1983-10-20
1981-05-13

EXHIBIT 9B


Permit #: 13-00059-W Project Name: CITY OF NORTH MIAMI
Requirement: Chloride fro F275
Value (MG/L)
140
120
100
80
60
40
20
0
1982-12-21
1983-06-21
1984-04-17
1984-12-11
1985-06-11
1986-02-28
1986-08-04
1987-03-04
1987-09-02
1988-05-04
1989-02-15
1991-03-06
1991-10-16
1992-04-02
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1994-04-07
1994-10-10
1995-05-12
1995-12-29
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2005-03-31
2005-09-30
2006-03-31
2006-09-30
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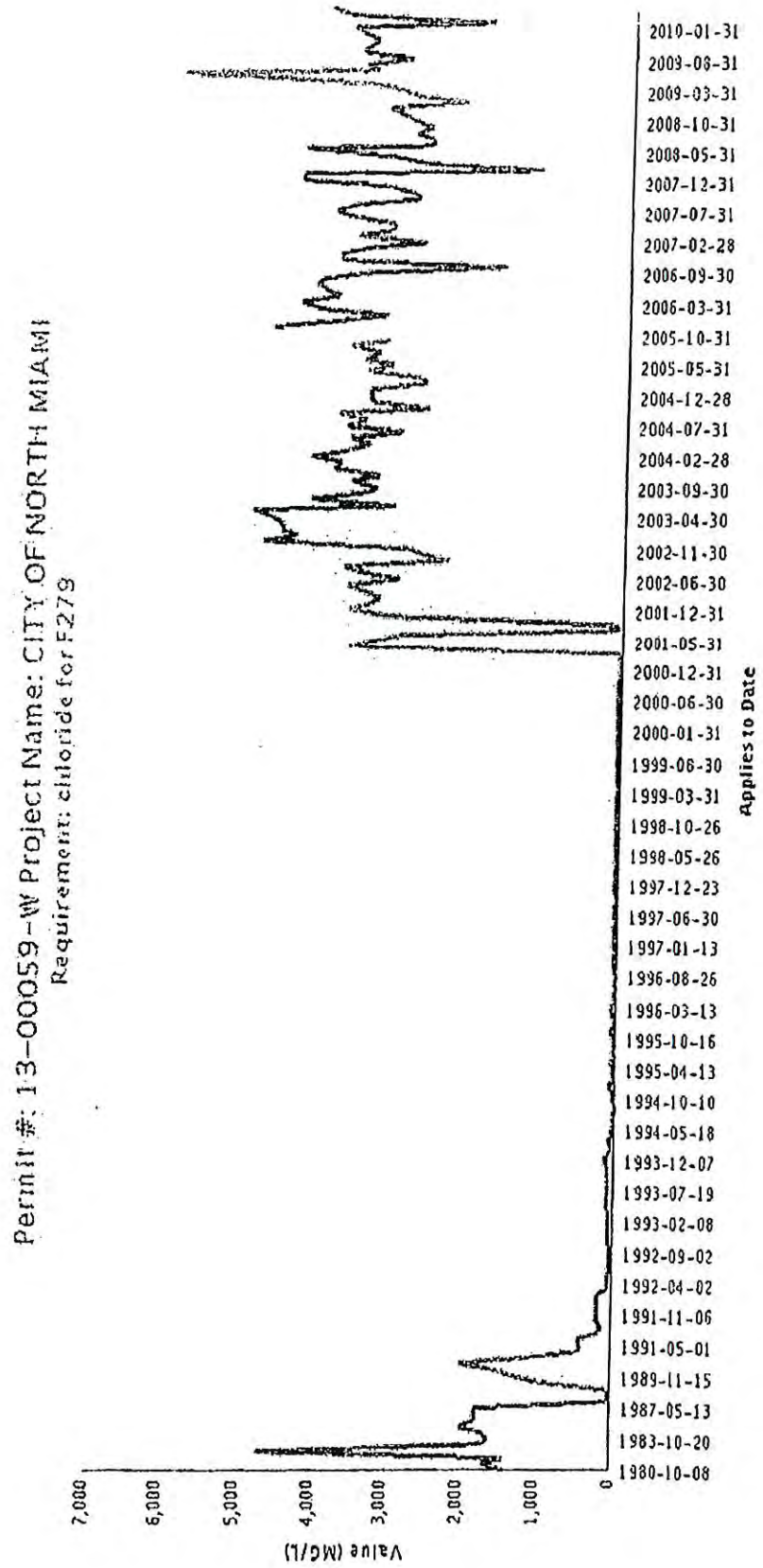
2008-09-30
2009-03-31
2009-09-30
2010-03-31
Applies to Date

Exhibit 9c


Permit #: 13-00059-W Project Name: CITY OF NORTH MIAMI
Requirement: chloride for F279
Value (MG/L)
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
Applies to Date
2010-01-31
2009-08-31
2009-03-31
2008-10-31
2008-05-31
2007-12-31
2007-07-31
2007-02-28
2006-09-30
2006-03-31
2005-10-31
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2001-05-31
2000-12-31
2000-06-30
2000-01-31
1999-06-30
1999-03-31
1998-10-26
1998-05-26
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1996-03-13
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1995-04-13
1994-10-10
1994-05-18
1993-12-07
1993-07-19
1993-02-08
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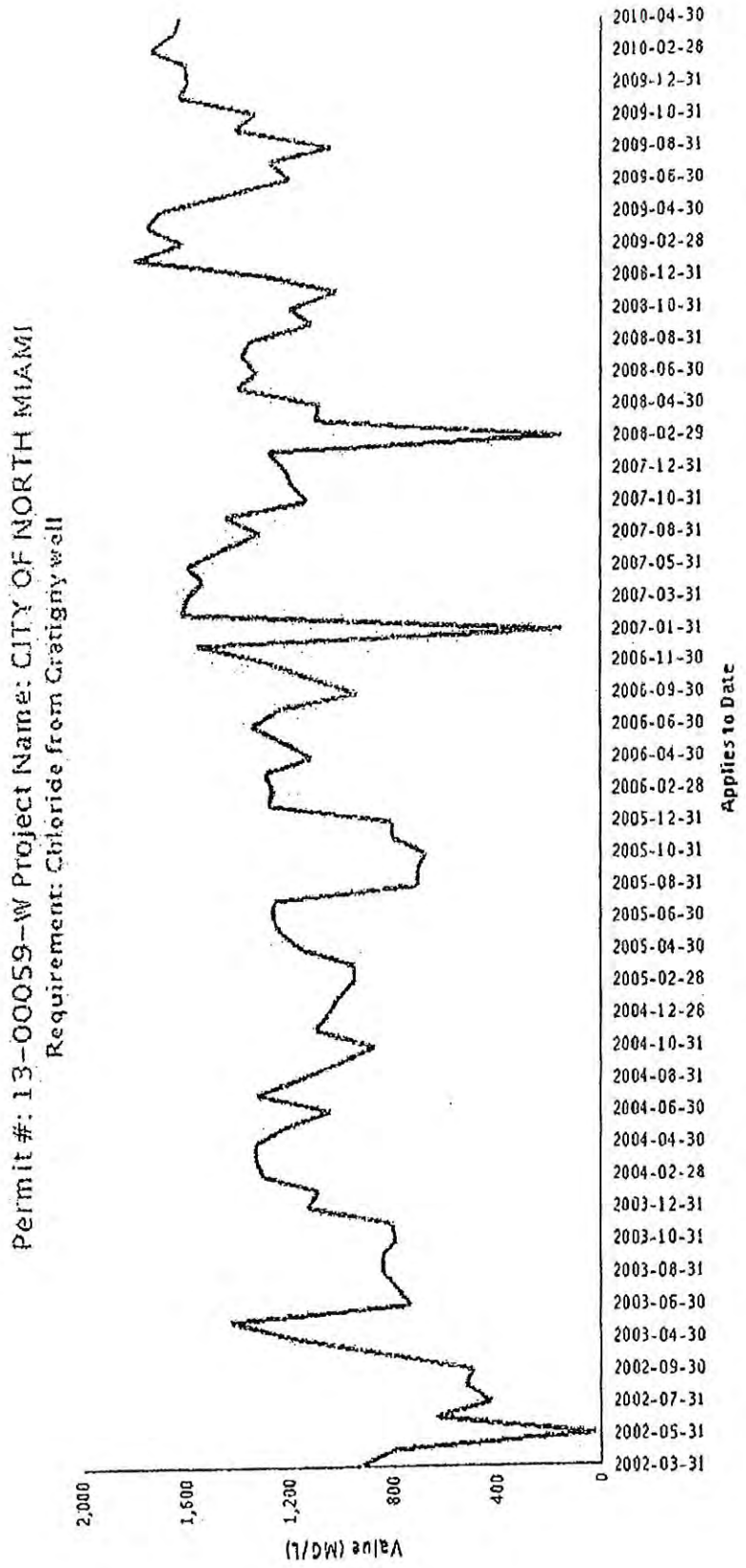
1987-05-13
1983-10-20
1980-10-08

EXHIBIT 9D


Permit #: 13-00059-W Project Name: CITY OF NORTH MIAMI
Requirement: Chloride from Gratigny well
Value (MG/L)
2,000
1,600
1,200
800
400
0
Applies to Date
2010-04-30
2010-02-28
2009-12-31
2009-10-31
2009-08-31
2009-06-30
2009-04-30
2009-02-28
2008-12-31
2008-10-31
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2004-06-30
2004-04-30
2004-02-28
2003-12-31
2003-10-31
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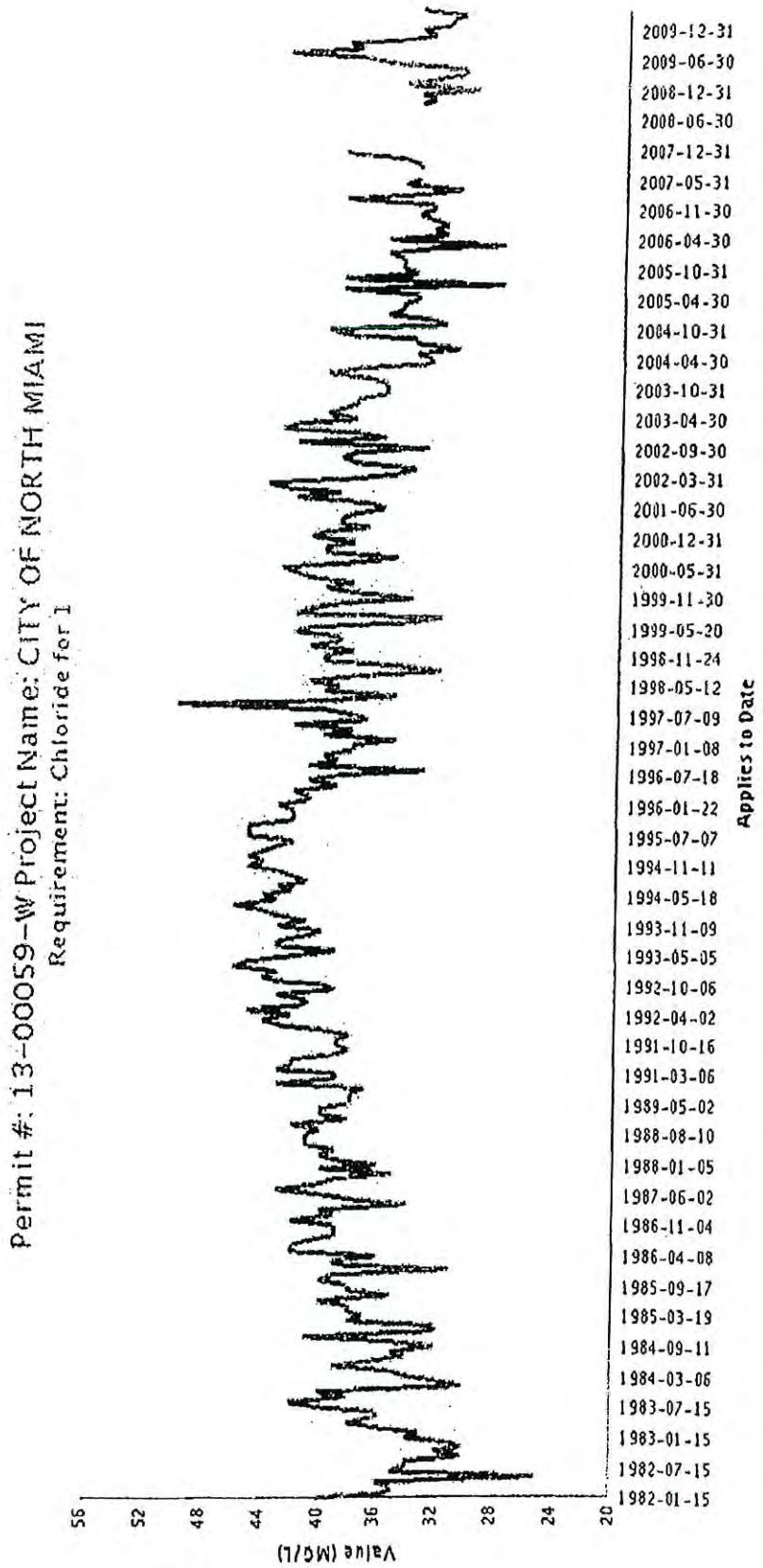
2002-09-30
2002-07-31
2002-05-31
2002-03-31

EXHIBIT 9E


Permit #: 13-00059-W Project Name: CITY OF NORTH MIAMI
Requirement: Chloride for 1
Value (MG/L)
56
52
48
44
40
36
32
28
24
20
Applies to Date
2009-12-31
2009-06-30
2008-12-31
2008-06-30
2007-12-31
2007-05-31
2006-11-30
2006-04-30
2005-10-31
2005-04-30
2004-10-31
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1992-04-02
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1989-05-02
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1988-01-05
1987-06-02
1986-11-04
1986-04-08
1985-09-17
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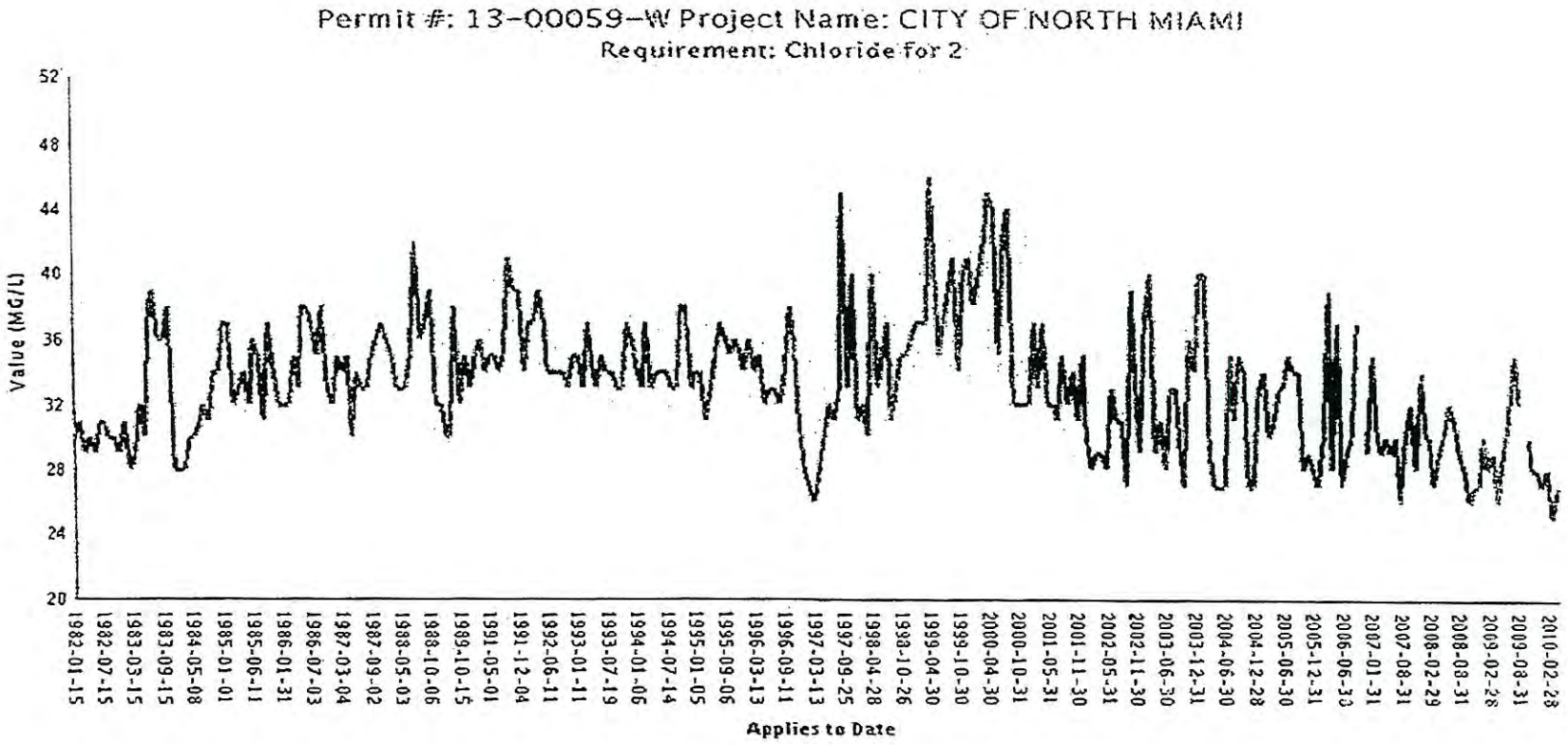
1984-03-06
1983-07-15
1983-01-15
1982-07-15
1982-01-15

EXHIBIT 9F


Permit #: 13-00059-W Project Name: CITY OF NORTH MIAMI
Requirement: Chloride for 2
Value (MG/L)
52
48
44
40
36
32
28
24
20
1982-01-15
1982-07-15
1983-03-15
1983-09-15
1984-05-08
1985-01-01
1985-06-11
1986-01-31
1986-07-03
1987-03-04
1987-09-02
1988-05-03
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2004-06-30
2004-12-28
2005-06-30
2005-12-31
2006-06-30
2007-01-31
2007-08-31
2008-02-29
2008-08-31
2009-02-28
2009-08-31
2010-02-28
Applies to Date

EXHIBIT 9G

Permit #: 13-00059-W Project Name: CITY OF NORTH MIAMI
Requirement: Chloride for 3
Value (MG/L)
50
40
30
20
10
0
Applies to Date
2010-01-31
2009-07-31
2009-01-31
2008-07-31
2008-01-31
2007-07-31
2007-01-31
2006-06-30
2005-12-31
2005-06-30
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1988-07-09
1988-01-05
1987-05-05
1986-10-06
1985-11-12
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1984-11-07
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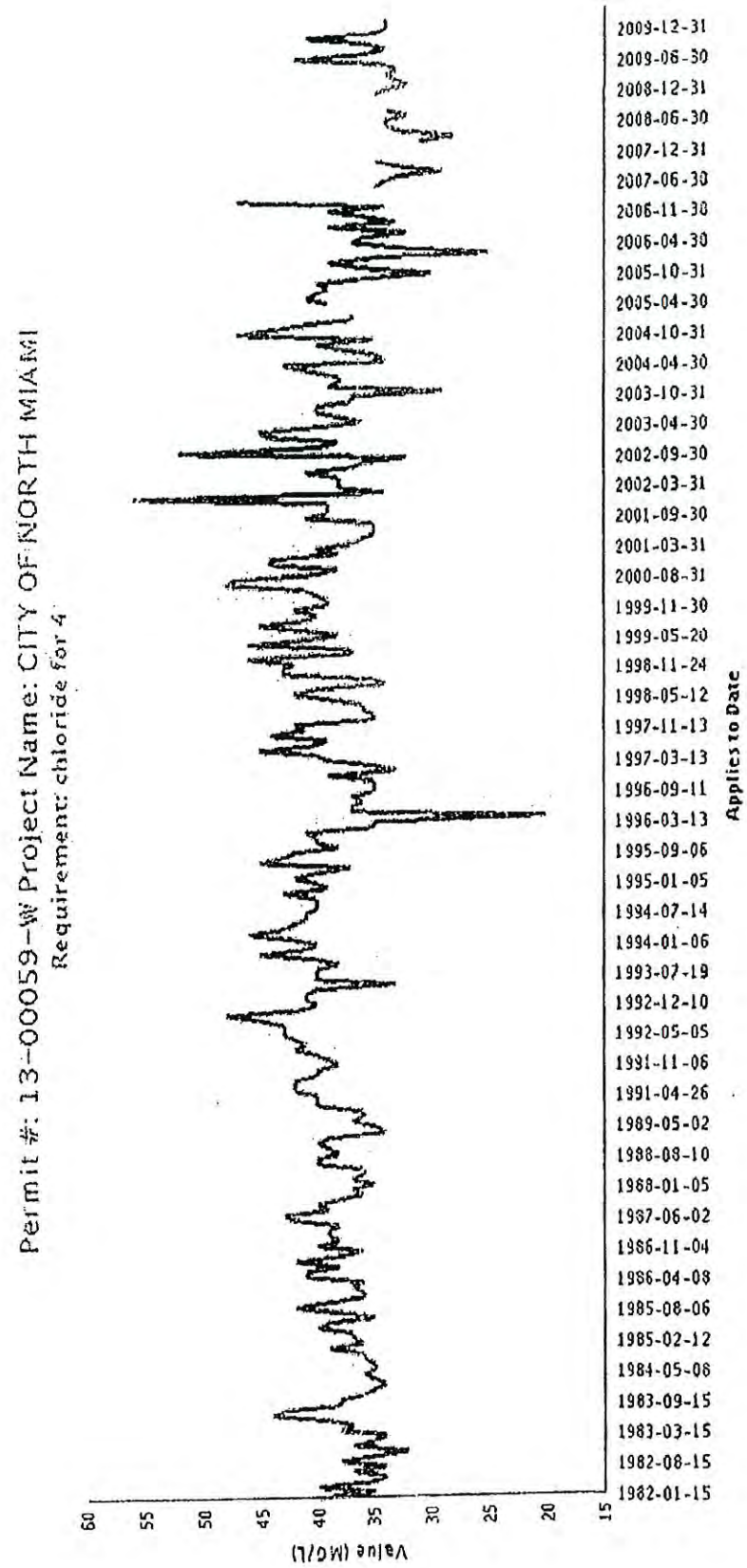
1983-07-15
1983-01-15
1982-07-15
1982-01-15

EXHIBIT 9H


Permit #: 13-00059-W Project Name: CITY OF NORTH MIAMI
Requirement: chloride for 4
Value (MG/L)
60
55
50
45
40
35
30
25
20
15
Applies to Date
2009-12-31
2009-06-30
2008-12-31
2008-06-30
2007-12-31
2007-06-30
2006-11-30
2006-04-30
2005-10-31
2005-04-30
2004-10-31
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1991-04-26
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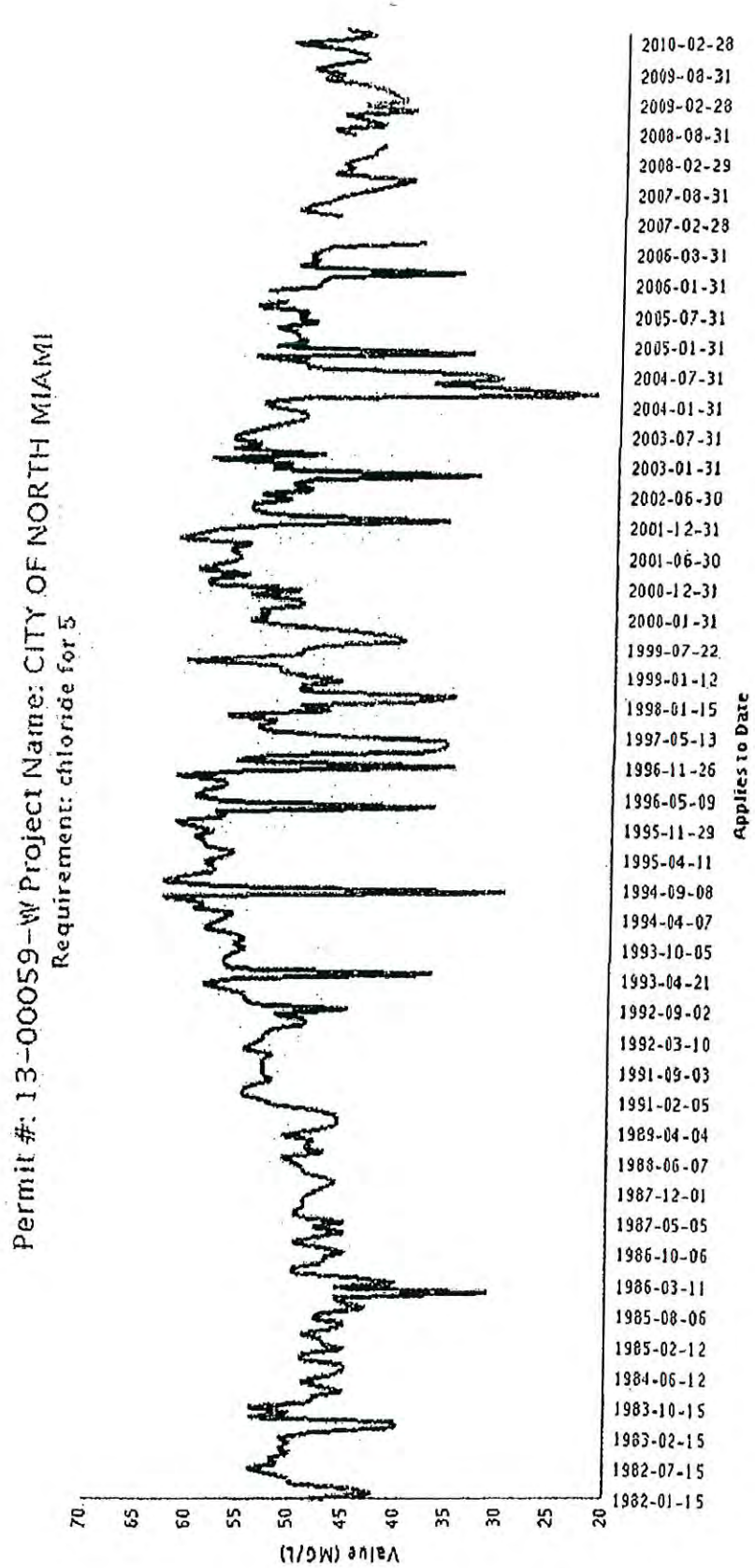
1988-08-10
1988-01-05
1987-06-02
1986-11-04
1986-04-08
1985-08-06
1985-02-12
1984-05-08
1983-09-15
1983-03-15
1982-08-15
1982-01-15

EXHIBIT 9 I


Permit #: 13-00059-W Project Name: CITY OF NORTH MIAMI
Requirement: chloride for 5
Value (MG/L)
70
65
60
55
50
45
40
35
30
25
20
Applies to Date
2010-02-28
2009-08-31
2009-02-28
2008-08-31
2008-02-29
2007-08-31
2007-02-28
2006-08-31
2006-01-31
2005-07-31
2005-01-31
2004-07-31
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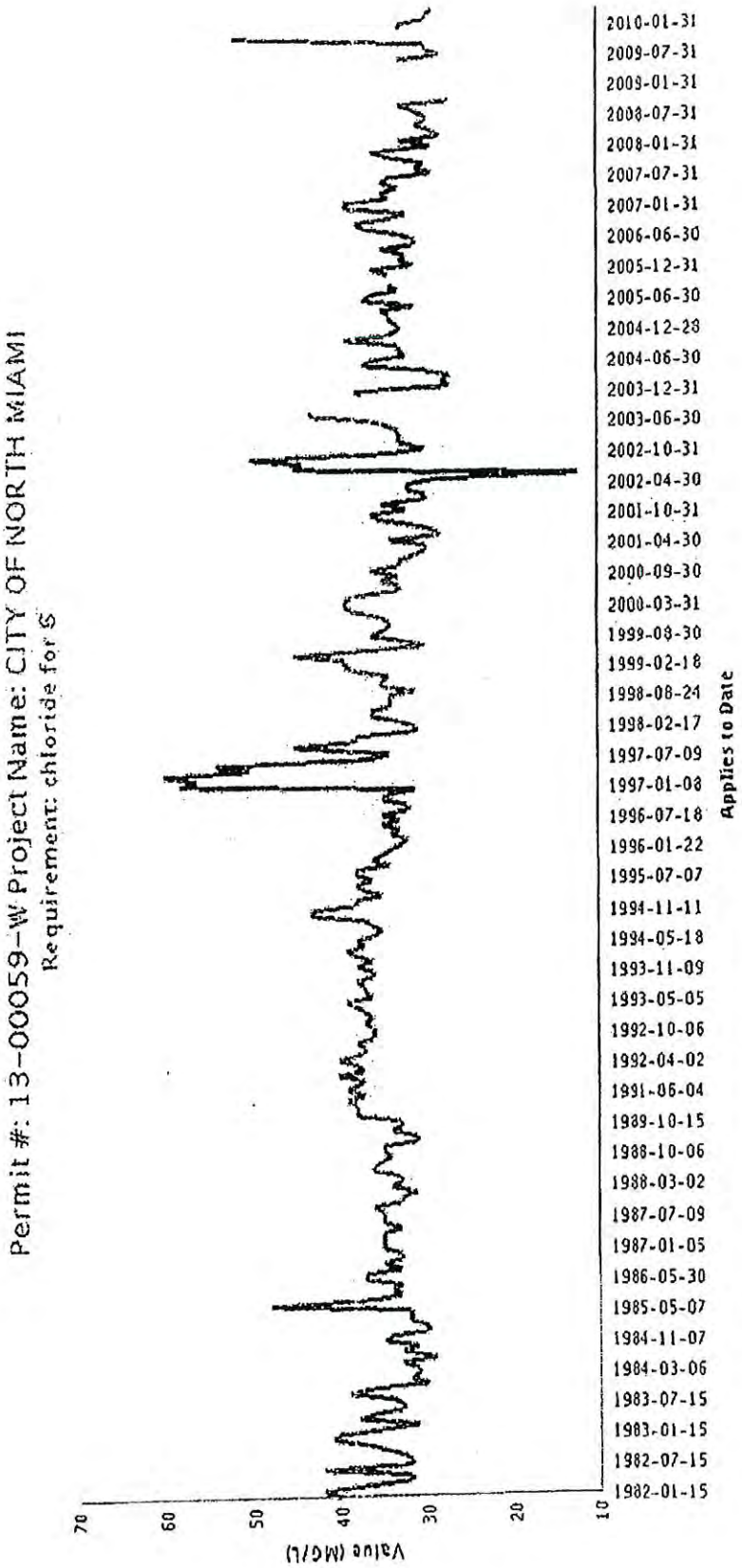
2000-12-31
2000-01-31
1999-07-22
1999-01-12
1998-01-15
1997-05-13
1996-11-26
1996-05-09
1995-11-29
1995-04-11
1994-09-08
1994-04-07
1993-10-05
1993-04-21
1992-09-02
1992-03-10
1991-09-03
1991-02-05
1989-04-04
1988-06-07
1987-12-01
1987-05-05
1986-10-06
1986-03-11
1985-08-06
1985-02-12
1984-06-12
1983-10-15
1983-02-15
1982-07-15
1982-01-15

EXHIBIT 9 J


Permit #: 13-00059-W Project Name: CITY OF NORTH MIAMI
Requirement: chloride for S
Value (MG/L)
70
60
50
40
30
20
10
Applies to Date
2010-01-31
2009-07-31
2009-01-31
2008-07-31
2008-01-31
2007-07-31
2007-01-31
2006-06-30
2005-12-31
2005-06-30
2004-12-28
2004-06-30
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1988-10-06
1988-03-02
1987-07-09
1987-01-05
1986-05-30
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1983-07-15
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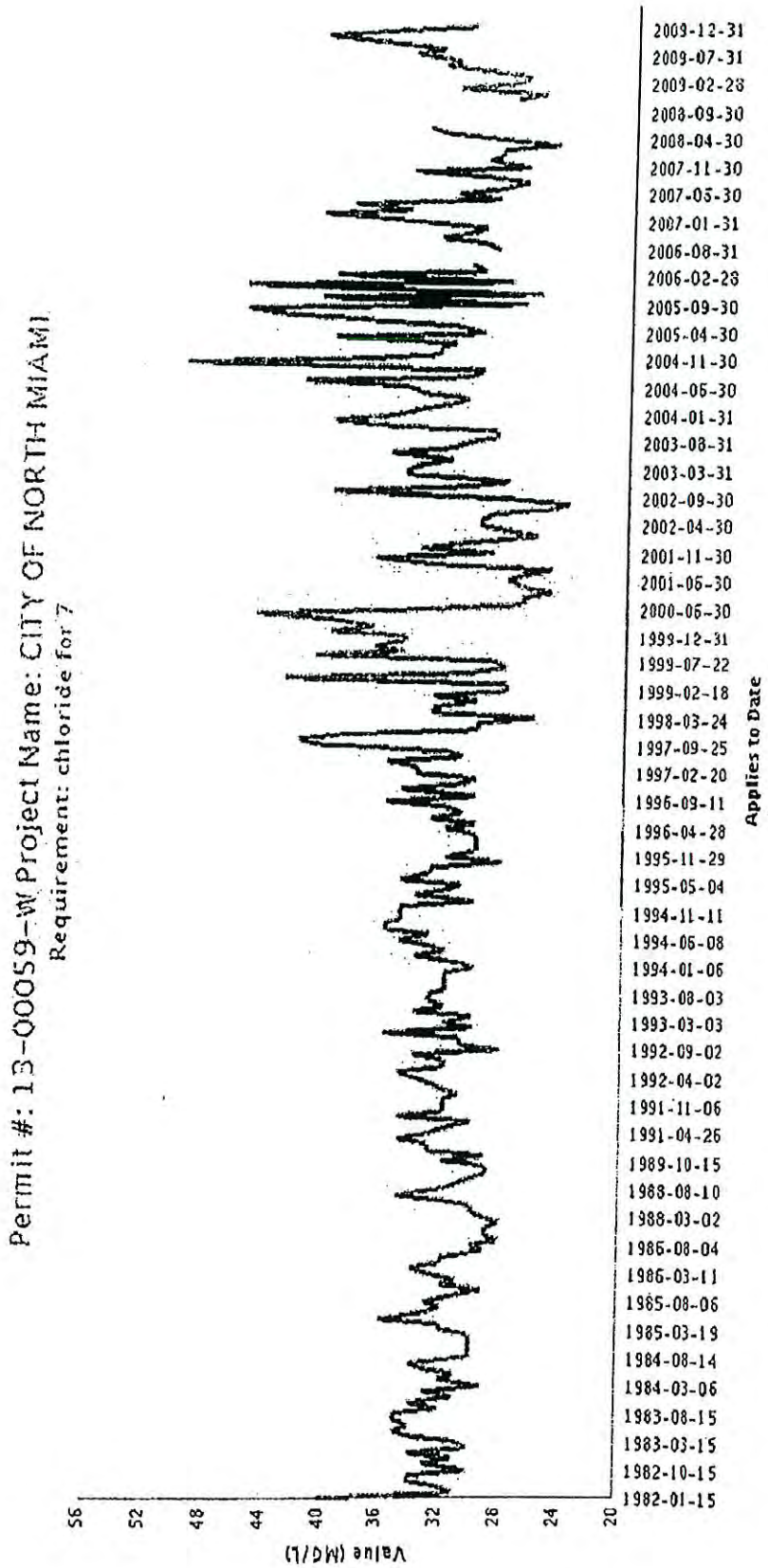
1982-07-15
1982-01-15

EXHIBIT 9K


Permit #: 13-00059-W Project Name: CITY OF NORTH MIAMI
Requirement: chloride for 7
Value (MG/L)
56
52
48
44
40
36
32
28
24
20
Applies to Date
2009-12-31
2009-07-31
2009-02-28
2008-09-30
2008-04-30
2007-11-30
2007-06-30
2007-01-31
2006-08-31
2006-02-28
2005-09-30
2005-04-30
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1999-07-22
1999-02-18
1998-03-24
1997-09-25
1997-02-20
1996-09-11
1996-04-28
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1994-11-11
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1994-01-06
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1993-03-03
1992-09-02
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1991-04-26
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1988-08-10
1988-03-02
1986-08-04
1986-03-11
1985-08-06
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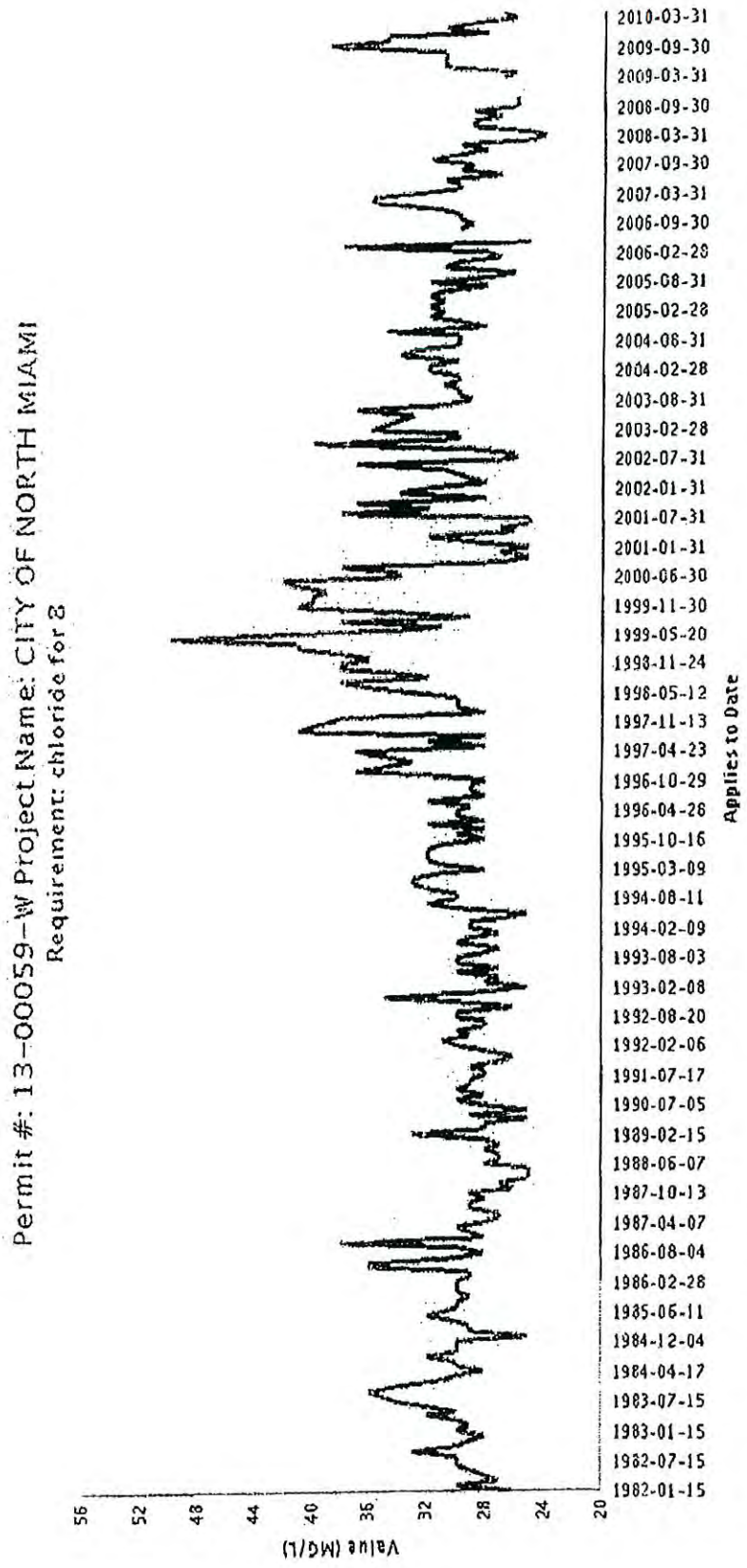
1984-08-14
1984-03-06
1983-08-15
1983-03-15
1982-10-15
1982-01-15

EXHIBIT 9L


Permit #: 13-00059-W Project Name: CITY OF NORTH MIAMI
Requirement: chloride for 2
Value (MG/L)
56
52
48
44
40
36
32
28
24
20
Applies to Date
2010-03-31
2009-09-30
2009-03-31
2008-09-30
2008-03-31
2007-09-30
2007-03-31
2006-09-30
2006-02-28
2005-08-31
2005-02-28
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1996-10-29
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1994-02-09
1993-08-03
1993-02-08
1992-08-20
1992-02-06
1991-07-17
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1989-02-15
1988-06-07
1987-10-13
1987-04-07
1986-08-04
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1984-12-04
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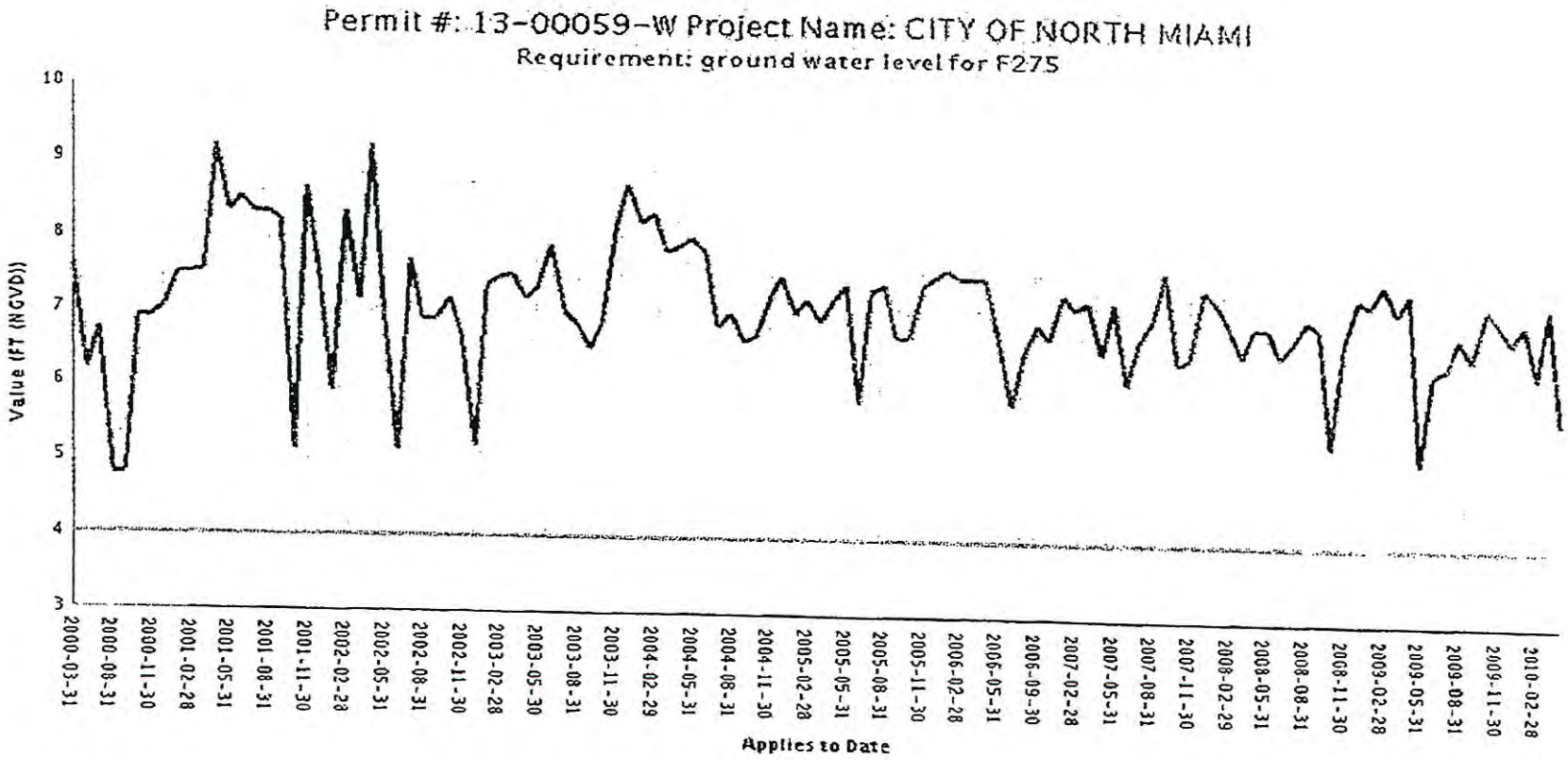
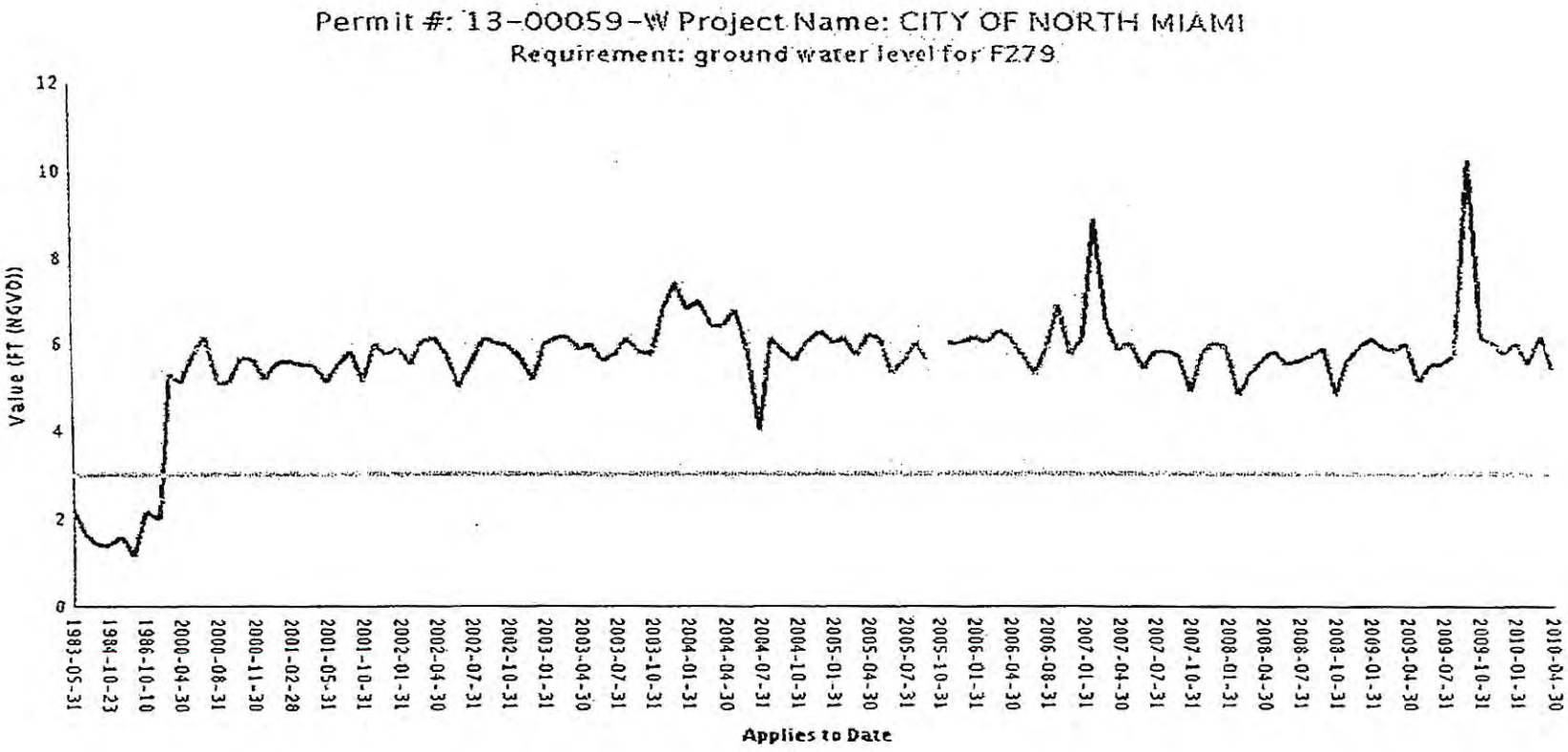
1983-07-15
1983-01-15
1982-07-15
1982-01-15

EXHIBIT 9 M



Spec 1: Low Value 4 FT (NGVD)

EXHIBIT 10A

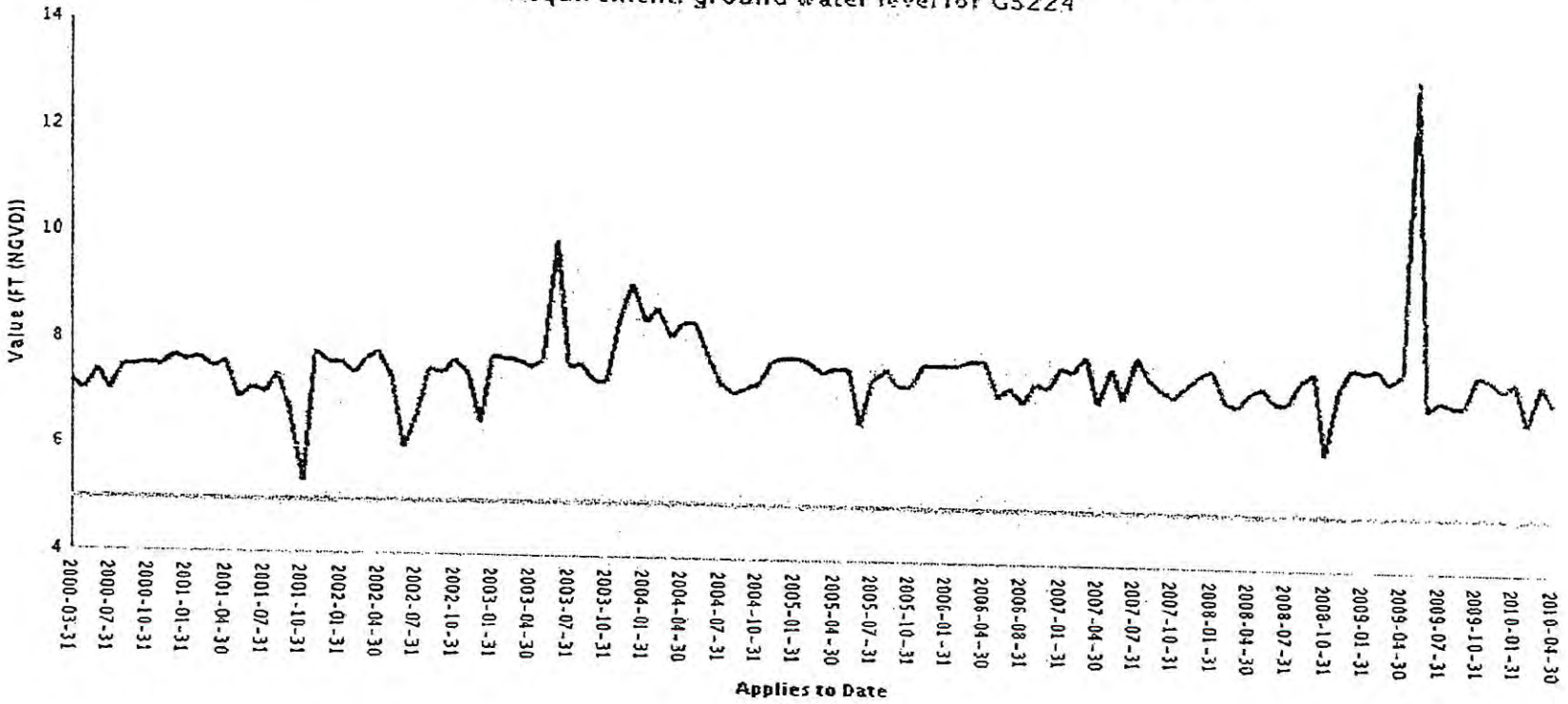


Spec 1: Low Value 3 FT (NGVD)

EXHIBIT 103

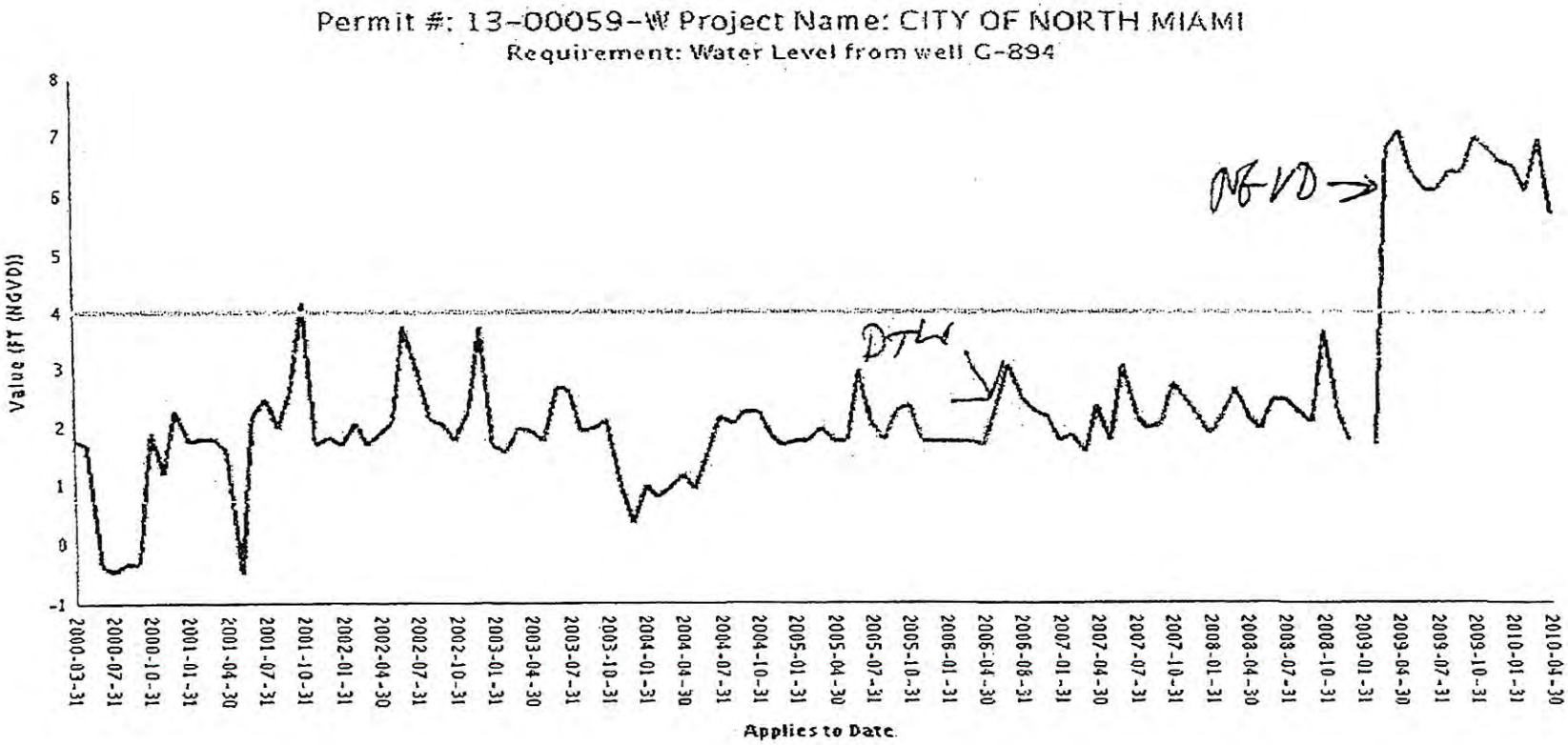
Permit #: 13-00059-W Project Name: CITY OF NORTH MIAMI

Requirement: ground water level for G3224



Spec 1: Low Value 5 FT (NGVD)

EXHIBIT 10C



Spec 1: Low Value 4 FT (NGVD)

EXHIBIT 10 D

ARCADIS U.S., Inc.

Memo

To: File

From: Thomas Tessier, PG

Thomas L. Tessier

CC: J. Penkosky

Date: May 21, 2008

Re: City of North Miami Water Use Permit Application, Floridan Aquifer Water Use

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As requested by Metcalf & Eddy, ARCADIS has performed analytical modeling to define the area encompassed by the 1-foot drawdown contour resulting from anticipated withdrawals from prospective public water supply wells tapping the Floridan Aquifer in the City of North Miami.

The Winflow groundwater flow model was used to simulate a Floridan Aquifer withdrawal of 12.0 million gallons per day (mgd). To address South Floridan Water Management District (SFWMD) Basis of Review criteria, it was anticipated that 10 wells would each withdraw 833.3 gallons per minute (1.2 mgd or 160,428 cubic feet per day) for 90 days. Winflow is capable of simulating withdrawals from a single layer with a leaky confining unit which are conditions found in the upper Floridan Aquifer from which the City of North Miami is anticipating to withdraw water.

As no test wells or aquifer testing has been conducted in the Floridan Aquifer in the vicinity of the prospective wells, ARCADIS assumed that the aquifer coefficients established by testing for the City of Hollywood's Water Use Permit (SFWMD Water Use Staff Review Summary, Exhibit 9, City of Hollywood Application #910614-6) would be reasonably accurate. The following aquifer coefficients were established: hydraulic conductivity (permeability), 60.16 feet/day; storage coefficient, 0.0002; aquifer thickness, 400 feet; leakance, 0.00014 foot/day-foot.

To apply leakance in the Winflow model, leakance must be converted to a "leakage factor" which is calculated to be 13,111 feet. According to the Water Use Staff Review Summary for the City of North Miami Beach Application #060207-8, the aquifer coefficients utilized to assess the City of Hollywood's water use also were used to assess the City of North Miami Beach's Floridan Aquifer water use.

As shown on the attached figure, the 1-foot drawdown contour extends approximately 6 miles from the center of the wellfield. An inventory of existing permitted Floridan Aquifer users within the 1-foot drawdown contour was provided by the South Florida Water Management District. Only 4 Floridan Aquifer wells owned by the City of North Miami Beach (WUP # 13-00060-W) were identified. Permitted Miami-Dade wells are located outside the 1-foot drawdown contour.

Maximum drawdown in the aquifer is estimated to be about 27.5 feet below the background static water level which is expected to be about 30 feet above sea level. Maximum drawdown at the nearest North Miami Beach well is about 4 feet (see figure). This magnitude of drawdown is not expected to impair the use of the North Miami Beach wells, which are to be equipped with pumps, according to the inventory.

EXHIBIT 11A

Accompanying this memo is a drawdown map, and Winflow input file. Also included are e-files of the Winflow model (FL1003MG.WFL) and the complete input and output file (I-O File FL12mgd.rtf).

Attach: Drawdown map, Input file
CD containing FL12MGD.WFL and I-O File FL12mgd.rtf

EXHIBIT II B

Aquifer Properties

.... Transient Flow Model ....

Permeability.....= 60.160000 [L/T]
Porosity.....= 0.200000
Storage.....= 0.000200
Leakage factor.....= 13111.000000
Elevation of Aquifer Top....= -1000.000000
Elevation of Aquifer Bottom.= -1400.000000
Uniform Regional Gradient...= 0.000000
Angle of Uniform Gradient...= 0.000000

Model Results Computed at Time = 90.000000

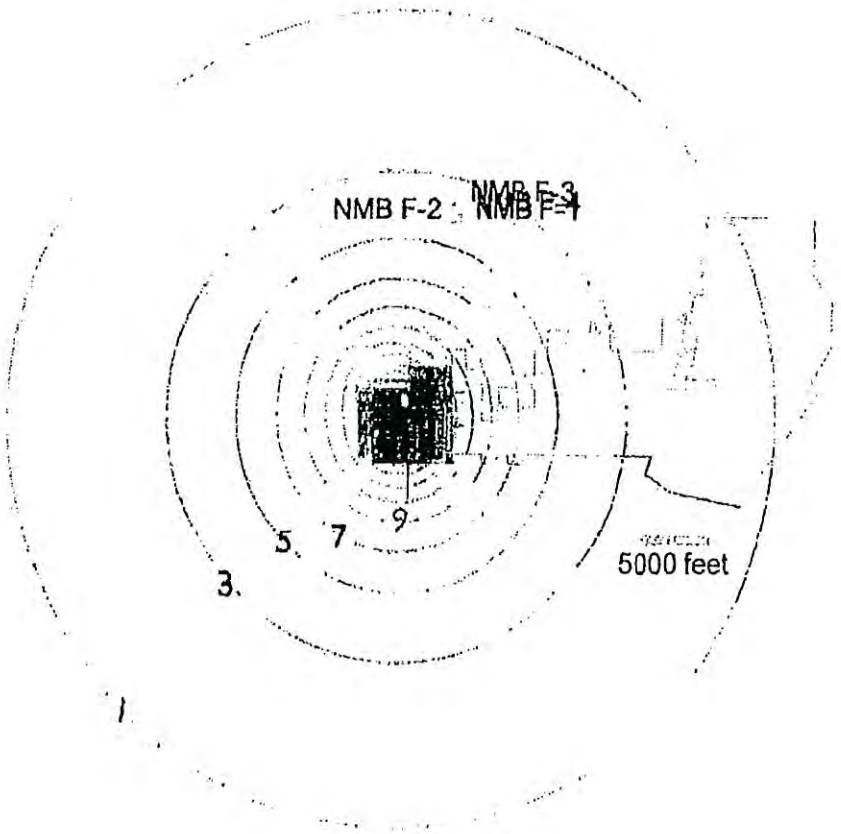

EXHIBIT 11C

Model Entities

Number of Linesinks Defined by Infiltration Rate = 0

Number of Linesinks Defined by Head = 0

Number of Ponds = 0

Number of Wells = 14

Well #1
Center of Well -- x: 911009.187500 y: 571855.437500
Radius = 1.000000
Pumping Rate = 160428.000000
Head at Well Radius = -25.094185

Well #2
Center of Well -- x: 909802.062500 y: 571933.625000
Radius = 1.000000
Pumping Rate = 160428.000000
Head at Well Radius = -26.089970

Well #3
Center of Well -- x: 908499.375000 y: 571950.937500
Radius = 1.000000
Pumping Rate = 160428.000000
Head at Well Radius = -24.409866

Well #4
Center of Well -- x: 911252.375000 y: 573305.750000
Radius = 1.000000
Pumping Rate = 160428.000000
Head at Well Radius = -25.942717

Well #5
Center of Well -- x: 909767.312500 y: 573140.750000
Radius = 1.000000
Pumping Rate = 160428.000000
Head at Well Radius = -27.009951

Well #6
Center of Well -- x: 910531.562500 y: 576036.875000
Radius = 1.000000
Pumping Rate = 160428.000000
Head at Well Radius = -27.233213

Well #7
Center of Well -- x: 910557.625000 y: 576879.250000
Radius = 1.000000
Pumping Rate = 160428.000000

EXHIBIT 11 D

```
    Head at Well Radius          = -26.858379
 Well #8
    Center of Well --  x: 909793.375000   y: 576931.375000
    Radius = 1.000000
    Pumping Rate = 160428.000000
    Head at Well Radius          = -27.490433
 Well #9
    Center of Well --  x: 908890.125000   y: 576948.750000
    Radius = 1.000000
    Pumping Rate = 160428.000000
    Head at Well Radius          = -26.783321
 Well #10
    Center of Well --  x: 908082.500000   y: 576974.812500
    Radius = 1.000000
    Pumping Rate = 160428.000000
    Head at Well Radius          = -25.089821
 Well #11
    Center of Well --  x: 914032.000000   y: 588133.000000
    Radius = 1.000000
    Pumping Rate = 0.000000
    Head at Well Radius          = -4.067492
 Well #12
    Center of Well --  x: 913635.000000   y: 588117.000000
    Radius = 1.000000
    Pumping Rate = 0.000000
    Head at Well Radius          = -4.127573
 Well #13
    Center of Well --  x: 913672.000000   y: 589392.000000
    Radius = 1.000000
    Pumping Rate = 0.000000
    Head at Well Radius          = -3.618148
 Well #14
    Center of Well --  x: 914080.000000   y: 588645.000000
    Radius = 1.000000
    Pumping Rate = 0.000000
    Head at Well Radius          = -3.854856

Reference Head = 0.000000    Defined at -- x: 746342.875000   y: 564397.000000
```

EXHIBIT II E

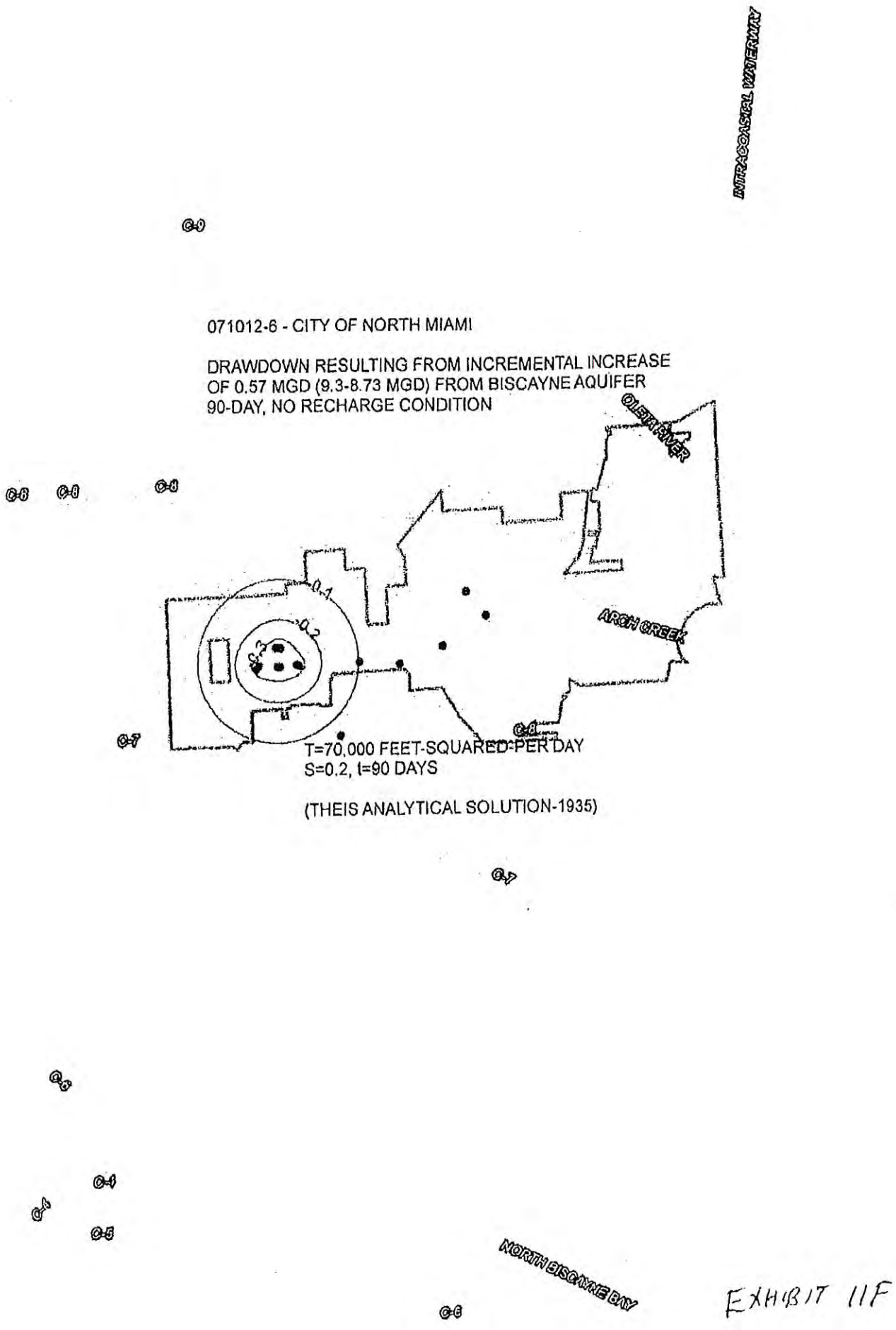
INTRACOASTAL WATERWAY
C-9
071012-6 - CITY OF NORTH MIAMI
DRAWDOWN RESULTING FROM INCREMENTAL INCREASE
OF 0.57 MGD (9.3-8.73 MGD) FROM BISCAYNE AQUIFER
90-DAY, NO RECHARGE CONDITION
OLETA RIVER
C-6
C-8
0.1
0.2
0.3
ARCH CREEK
C-7
C-8
T=70,000 FEET-SQUARED-PER DAY
S=0.2, t=90 DAYS
(THEIS ANALYTICAL SOLUTION-1935)
C-7
C-3
C-4
C-5
NORTH BISCAYNE BAY
C-6

EXHIBIT IIF

Requirement by Limiting Condition Report

App No: 071012-6
Permit No: 13-00059-W
Project Name: CITY OF NORTH MIAMI

Expiration Date: 23-AUG-30
Issued Date:

Limiting Condition No: 17 Limiting Condition Code: WUSTD021-8

Facility Name	Requirement Name	Due Date	Start Date	End Date	Col Freq	Sub Freq
WELL - Winson 1	Calibration report for WELL Winson 1	03-SEP-14	01-SEP-10	31-JUL-30	Every Five Years	Every Five Years
WELL - Winson 2	Calibration report for WELL Winson 2	03-SEP-14	01-SEP-10	31-JUL-30	Every Five Years	Every Five Years
WELL - Winson 3	Calibration report for WELL Winson 3	03-SEP-14	01-SEP-10	31-JUL-30	Every Five Years	Every Five Years
WELL - Winson 4	Calibration report for WELL Winson 4	03-SEP-14	01-SEP-10	31-JUL-30	Every Five Years	Every Five Years
WELL - Winson 5	Calibration report for WELL Winson 5	15-JAN-14	01-SEP-10	31-JUL-30	Every Five Years	Every Five Years
WELL - Winson 6	Calibration report for WELL Winson 6	15-JAN-14	01-SEP-10	31-JUL-30	Every Five Years	Every Five Years
WELL - Winson 7	Calibration report for WELL Winson 7	03-SEP-14	01-SEP-10	31-JUL-30	Every Five Years	Every Five Years
WELL - Winson 8	Calibration report for WELL Winson 8	03-SEP-14	01-SEP-10	31-JUL-30	Every Five Years	Every Five Years
WELL - FL-1	Calibration report for WELL FL-1	28-FEB-11	01-SEP-10	31-JUL-30	Every Five Years	Every Five Years
WELL - FL-2	Calibration report for WELL FL-2	28-FEB-11	01-SEP-10	31-JUL-30	Every Five Years	Every Five Years
WELL - FL-3	Calibration report for WELL FL-3	28-FEB-11	01-SEP-10	31-JUL-30	Every Five Years	Every Five Years
WELL - FL-4	Calibration report for WELL FL-4	28-FEB-11	01-SEP-10	31-JUL-30	Every Five Years	Every Five Years
WELL - FL-6	Calibration report for WELL FL-6	28-FEB-11	01-SEP-10	31-JUL-30	Every Five Years	Every Five Years
WELL - FL-7	Calibration report for WELL FL-7	28-FEB-11	01-SEP-10	31-JUL-30	Every Five Years	Every Five Years
WELL - FL-8	Calibration report for WELL FL-8	28-FEB-11	01-SEP-10	31-JUL-30	Every Five Years	Every Five Years
WELL - FL-9	Calibration report for WELL FL-9	28-FEB-11	01-SEP-10	31-JUL-30	Every Five Years	Every Five Years
WELL - FL-10	Calibration report for WELL FL-10	28-FEB-11	01-SEP-10	31-JUL-30	Every Five Years	Every Five Years

Limiting Condition No: 18 Limiting Condition Code: WUSTD022-1

Facility Name	Requirement Name	Due Date	Start Date	End Date	Col Freq	Sub Freq
WELL - Winson 1	Monthly withdrawal for WELL Winson 1	31-JAN-11	01-SEP-10	31-JUL-30	Monthly	Quarterly
WELL - Winson 2	Monthly withdrawal for WELL Winson 2	31-JAN-11	01-SEP-10	31-JUL-30	Monthly	Quarterly
WELL - Winson 3	Monthly withdrawal for WELL Winson 3	31-JAN-11	01-SEP-10	31-JUL-30	Monthly	Quarterly
WELL - Winson 4	Monthly withdrawal for WELL Winson 4	31-JAN-11	01-SEP-10	31-JUL-30	Monthly	Quarterly
WELL - Winson 5	Monthly withdrawal for WELL Winson 5	31-JAN-11	01-SEP-10	31-JUL-30	Monthly	Quarterly
WELL - Winson 6	Monthly withdrawal for WELL Winson 6	31-JAN-11	01-SEP-10	31-JUL-30	Monthly	Quarterly
WELL - Winson 7	Monthly withdrawal for WELL Winson 7	31-JAN-11	01-SEP-10	31-JUL-30	Monthly	Quarterly

Exhibit No: 12

Requirement by Limiting Condition Report

Facility Name	Requirement Name	Due Date	Start Date	End Date	Col Freq	Sub Freq
WELL - Winson 8	Monthly withdrawal for WELL Winson 8	31-JAN-11	01-SEP-10	31-JUL-30	Monthly	Quarterly
WELL - FL-1	Monthly withdrawal for WELL FL-1	31-JAN-11	01-SEP-10	31-JUL-30	Monthly	Quarterly
WELL - FL-2	Monthly withdrawal for WELL FL-2	31-JAN-11	01-SEP-10	31-JUL-30	Monthly	Quarterly
WELL - FL-3	Monthly withdrawal for WELL FL-3	31-JAN-11	01-SEP-10	31-JUL-30	Monthly	Quarterly
WELL - FL-4	Monthly withdrawal for WELL FL-4	31-JAN-11	01-SEP-10	31-JUL-30	Monthly	Quarterly
WELL - FL-6	Monthly withdrawal for WELL FL-6	31-JAN-11	01-SEP-10	31-JUL-30	Monthly	Quarterly
WELL - FL-7	Monthly withdrawal for WELL FL-7	31-JAN-11	01-SEP-10	31-JUL-30	Monthly	Quarterly
WELL - FL-8	Monthly withdrawal for WELL FL-8	31-JAN-11	01-SEP-10	31-JUL-30	Monthly	Quarterly
WELL - FL-9	Monthly withdrawal for WELL FL-9	31-JAN-11	01-SEP-10	31-JUL-30	Monthly	Quarterly
WELL - FL-10	Monthly withdrawal for WELL FL-10	31-JAN-11	01-SEP-10	31-JUL-30	Monthly	Quarterly

Limiting Condition No: 21 Limiting Condition Code: WUPWS003-1

Facility Name	Requirement Name	Due Date	Start Date	End Date	Col Freq	Sub Freq
PERMIT	Unaccounted for Distribution Losses for PERMIT	31-AUG-12	01-SEP-10	31-JUL-30	Yearly	Yearly

Limiting Condition No: 23 Limiting Condition Code: WUPWS008-2

Facility Name	Requirement Name	Due Date	Start Date	End Date	Col Freq	Sub Freq
PERMIT	Ten-Year Water Use Compliance Report for CITY OF NORTH MIAMI	31-JUL-30	01-SEP-10	31-JUL-30	Every Ten Years	Every Ten Years

Limiting Condition No: 24 Limiting Condition Code: WUPWS006-1

Facility Name	Requirement Name	Due Date	Start Date	End Date	Col Freq	Sub Freq
PERMIT	Water Conservation Plan Ordinances A, B, D, and F.	31-AUG-10	31-AUG-10	23-AUG-30	One time Only	One time Only

Limiting Condition No: 27 Limiting Condition Code: WUWC004-1

Facility Name	Requirement Name	Due Date	Start Date	End Date	Col Freq	Sub Freq
WELL - FL-1	Updated Table A for WELL FL-1	01-MAR-11	01-SEP-10	31-JUL-30	One time Only	One time Only
WELL - FL-2	Updated Table A for WELL FL-2	01-MAR-11	01-SEP-10	31-JUL-30	One time Only	One time Only
WELL - FL-3	Updated Table A for WELL FL-3	01-MAR-11	01-SEP-10	31-JUL-30	One time Only	One time Only
WELL - FL-4	Updated Table A for WELL FL-4	01-MAR-11	01-SEP-10	31-JUL-30	One time Only	One time Only
WELL - FL-5	Updated Table A for WELL FL-5	01-MAR-11	01-SEP-10	31-JUL-30	One time Only	One time Only
WELL - FL-6	Updated Table A for WELL FL-6	01-MAR-11	01-SEP-10	31-JUL-30	One time Only	One time Only

Exhibit No: 12

Requirement by Limiting Condition Report

Facility Name	Requirement Name	Due Date	Start Date	End Date	Col Freq	Sub Freq
WELL - FL-7	Updated Table A for WELL FL-7	01-MAR-11	01-SEP-10	31-JUL-30	One time Only	One time Only
WELL - FL-8	Updated Table A for WELL FL-8	01-MAR-11	01-SEP-10	31-JUL-30	One time Only	One time Only
WELL - FL-9	Updated Table A for WELL FL-9	01-MAR-11	01-SEP-10	31-JUL-30	One time Only	One time Only
WELL - FL-10	Updated Table A for WELL FL-10	01-MAR-11	01-SEP-10	31-JUL-30	One time Only	One time Only

Limiting Condition No: 28 **Limiting Condition Code:** WUDWT008-1

Facility Name	Requirement Name	Due Date	Start Date	End Date	Col Freq	Sub Freq
WELL - F-275	Ground Water Level for Well F-275	30-NOV-10	01-SEP-10	31-JUL-30	Monthly	Quarterly
WELL - F-275	Chloride for Well F-275	30-NOV-10	01-SEP-10	31-JUL-30	Monthly	Quarterly
WELL - F-279	Ground Water Level for Well F-279	30-NOV-10	01-SEP-10	31-JUL-30	Monthly	Quarterly
WELL - F-279	Chloride for Well F-279	30-NOV-10	01-SEP-10	31-JUL-30	Monthly	Quarterly
WELL - G-3224	Ground Water Level for Well G-3224	30-NOV-10	01-SEP-10	31-JUL-30	Monthly	Quarterly
WELL - G-3224	Chloride for Well G-3224	30-NOV-10	01-SEP-10	31-JUL-30	Monthly	Quarterly
WELL - G-894	Ground Water Level for Well G-894	30-NOV-10	01-SEP-10	31-JUL-30	Monthly	Quarterly
WELL - G-894	Chloride for Well G-894	30-NOV-10	01-SEP-10	31-JUL-30	Monthly	Quarterly
Gratigny Well	Ground Water Level for Well Gratigny Moniter Well	30-NOV-10	01-SEP-10	31-JUL-30	Monthly	Quarterly
Gratigny Well	Chloride for Well Gratigny Moniter Well	30-NOV-10	01-SEP-10	31-JUL-30	Monthly	Quarterly
WELL - Winson 1	Chloride for Well Winson 1	30-NOV-10	01-SEP-10	31-JUL-30	Monthly	Quarterly
WELL - Winson 2	Chloride for Well Winson 2	30-NOV-10	01-SEP-10	31-JUL-30	Monthly	Quarterly
WELL - Winson 3	Chloride for Well Winson 3	30-NOV-10	01-SEP-10	31-JUL-30	Monthly	Quarterly
WELL - Winson 4	Chloride for Well Winson 4	30-NOV-10	01-SEP-10	31-JUL-30	Monthly	Quarterly
WELL - Winson 5	Chloride for Well Winson 5	30-NOV-10	01-SEP-10	31-JUL-30	Monthly	Quarterly
WELL - Winson 6	Chloride for Well Winson 6	30-NOV-10	01-SEP-10	31-JUL-30	Monthly	Quarterly
WELL - Winson 7	Chloride for Well Winson 7	30-NOV-10	01-SEP-10	31-JUL-30	Monthly	Quarterly
WELL - Winson 8	Chloride for Well Winson 8	30-NOV-10	01-SEP-10	31-JUL-30	Monthly	Quarterly
WELL - G-297 (121 & 4th)	Chloride for Well G-297	30-NOV-10	01-SEP-10	31-JUL-30	Monthly	Quarterly

Exhibit No. 12

STAFF REPORT DISTRIBUTION LIST

CITY OF NORTH MIAMI

Application No: 071012-6

Permit No: 13-00059-W

INTERNAL DISTRIBUTION

X John A. Lockwood, P.G.
X Permit File
X R. Karafel
X WU Compliance - C. Thompson

EXTERNAL DISTRIBUTION

X Permittee - City Of North Miami
X Agent - City Of North Miami
X Other Interested Party - Borgognoni & Guitierrez, Llp

GOVERNMENT AGENCIES

X City of Homestead
X Dept of Environmental Protection -West Palm Beach
X Miami-Dade County -DERM (Carlos Espinosa, PE)
X Miami-Dade County Engineer Public Works Department

OTHER INTERESTED PARTIES

X B.F. Sewell

Exhibit No:13

City of North Miami, Florida
Water and Sewer Rate Study
City Council Presentation

Project Drivers:

1. **Water Use Permit Requirement, (Section 2.6.1 Water Use Permit with South Florida Water Management District)**
    a. **Develop a Conservation Plan** (the City has to utilize all options to use water efficiently)
        i. Implement Water **Conservation Rates**
            1. The new rate structure should have been implemented from August 31, 2011.

"The City is currently non-compliant"

2. **Sanitary Sewer Evaluation Survey (mandate from Environmental Protection Agency "EPA")**
    a. City has to implement specific Capital Projects based on this survey
    b. Required by the EPA and Miami-Dade County Water and Sewer Department. VSCO CHAPER 24 Miami Dade Ordinance .

3. **Maintain Adequate Level of Utility Service**
    a. The existing Water Plant is past its useful life
    b. The Water Transmission and Distribution System needs to be updated
    c. The existing plan funds the implementation of Critical Utility System Infrastructure

4. **Meet Bonding and Loan Requirements**
    a. Generate sufficient revenues to meet all cost (operating and capital)
    b. Maintain the ability to pay debt service obligations and related requirements
    c. Maintain a sufficient levels of liquidity, in case of an unforeseen event

MINUTES
NORTH MIAMI PLANNING COMMISSION
7:00 P.M.
MAY 3, 2011
COUNCIL CHAMBERS

The meeting was called to order at 7:00 p.m. After the pledge of allegiance, a roll call of the members was taken.

	Name	Present:	Excused	Absent
1	Kevin Seifried	X		
2	Charles Ernst	X		
3	Arrie Fils-Aime		X	
4	Jesús Remón	X		
5	Maureen Harwitz	X		
6	Kenny Each	X		
7	Jean Castor	X		
8	Bill Prevatel		X	
9	Bonnie Schwartzbaum		X	

Staff was represented by:

Tanya Wilson-Sejour, City Planner
Roland Galdos, Deputy City Attorney
Aleem Ghany, Public Works Director
Arceli Redila, Board Secretary/Administrative Specialist
Dunia Sanzetenea, Webmaster/Videographer

I-D. Assembly and Organization – Amendments to the Agenda:
Ms. Wilson-Sejour stated that PC 05-11 will be continued at the request of the Community Redevelopment Agency pending conveyance of the property back to the city.

II. Approval of Minutes: The minutes of March 3, 2011 were unanimously approved as presented. The motion was made by Mr. Each, seconded by Mr. Ernst.

III. Continued Public Hearings: None

IV. Public Hearings:

PC 04-11: AN ORDINANCE OF THE MAYOR AND CITY COUNCIL OF THE CITY OF NORTH MIAMI, FLORIDA, AMENDING CHAPTER 29 OF THE CITY OF NORTH MIAMI CODE OF ORDINANCES, ENTITLED "LAND DEVELOPMENT REGULATIONS" BY AMENDING ARTICLE 5, DIVISION 12 ENTITLED "LANDSCAPING AND SCREENING",

SPECIFICALLY AT SECTION 5-1203 ENTITLED "GENERAL STANDARDS", TO CURTAIL OR RESTRICT CERTAIN USES OF WATER TO CONSERVE AVAILABLE WATER RESOURCES DURING A DECLARED WATER SHORTAGE OR WATER SHORTAGE EMERGENCY, IN ACCORDANCE WITH THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT REGULATIONS; PROVIDING FOR CONFLICTS, REPEAL, SEVERABILITY, CODIFICATION, AND AN EFFECTIVE DATE.

Ms Tanya Wilson-Sejour from the Community Planning & Development department gave the staff report stating that staff is recommending that the Planning Commission recommend approval of the proposed ordinance to amend Article 5 Section 5-1203 of the City's Land Development Regulation (LDR) to meet the permit requirements of the South Florida Water Management District Water Use Permit (WUP) No. Re-Issue 13-00059-W, and forward said changes to the City Council for final consideration.

Mr. Aleem Ghany, Public Works director was also present and stated that the intent of the City is to amend Article 5 Section-1203 of the City's Land Development Regulation in order to satisfy the requirements of Limiting Condition 24 and the Staff Review Summary of the South Florida Water Management District Water Use Permit which require a Water Conservation Plan, including ordinances for Florida Friendly Landscape, and rain sensor devices.

Public Discussion: There was no member of the public that came and speak for the item.

Commission Discussion:

The Commission reviewed and discussed the proposed Ordinance. The following are questions raised by the Commissioners:

- One of the recommendations from the SFWMD was a water conservation rate structure, is there any recommendation from the Public Works department regarding this strategy?
  - Mr. Ghany replied that the city is in the process of revamping the current system and is conducting a study towards the adoption of a tiered water conservation rate structures that will be implemented before the end of August 2011.
- There are a lot of old housing stocks in the city, has the city thought about doing free toilet replacements for those homes?
  - Mr. Ghany replied that the toilet replacement program is a little bit complicated due to the price of the commodes so instead, the city offers a low flow shower head replacement and leak detection programs.
- Does the city monitor the water pressure?
  - Mr. Ghany replied that by law we are required to maintain 20psi, even during peak time when demand is very high the pressure does not drop below 20psi at any given time.
- What is today's standard for an efficient toilet?
  - Mr. Ghany replied that the Florida Building code requires that all installed toilets for new constructions be rated at a maximum flow rate of 1.6 gallons per flush but there are toilets in the market today that exceeds this standard such as 1.2 gallons per flush.

The Commission supported staff's recommendation as proposed and rendered a unanimous vote. The motion to approve was made by Ms. Harwitz and was seconded by Mr. Each.

V. **Committee Reports:** None

VI. **Old Business:** None

VII. **New Business:** None

VIII. **Communications:** None

IX. **Adjournment:** None

There being no further business to come before the Planning Commission, the meeting adjourned at 7:25 p.m.

Respectfully submitted:

Attest:

Kevin Seifried, Chairman
Planning Commission

Tanya Wilson-Sejour, AICP, City Planner
Community Planning & Development

Arceli Redila, LEED AP, Board Secretary/Administrative Specialist
Community Planning & Development