



ORANGE WATER AND SEWER AUTHORITY

*A public, non-profit agency providing water, sewer and reclaimed water services
to the Carrboro-Chapel Hill community.*

AGENDA **MEETING OF THE OWASA BOARD OF DIRECTORS** **THURSDAY, MARCH 25, 2010, 7:00 P.M.** **CHAPEL HILL TOWN COUNCIL**

In compliance with the "Americans with Disabilities Act," interpreter services are available with five days prior notice. If you need this assistance, please call the Clerk to the Board at 537-4217 or aorbich@owasa.org.

7:00 PM

Announcements

1. Announcements by the Chair
 - A. Any Board member who knows of a conflict of interest or potential conflict of interest with respect to any item on the agenda tonight is asked to disclose the same at this time.
 - B. Update on the March 22, 2010 Chapel Hill Town Council Meeting regarding OWASA's draft Long-Range Water Supply Plan
 - C. Finance Committee meeting will be held on Monday, March 29, 2010 at 8:00 AM in the OWASA Boardroom to continue discussions related to the Fiscal Year 2011 Budget
2. Announcements by Board Members
3. Announcements by Staff
 - A. Recreation at the Lakes will begin on Saturday, March 27, 2010 (John Greene)

Petitions and Requests

1. Public
2. Board
3. Staff

7:05 PM

CONSENT AGENDA

Action

1. Approval of the Minutes of the February 25, 2010 Board of Directors' Meeting (Andrea Orbich)
2. Resolution Authorizing Executive Director to Renew Public Officials & Employees Liability Insurance for One Year Period for \$2,000,000 of Coverage with National Union Fire Insurance Company of Pittsburg, PA (Jan Bryant-Berry)
3. Resolution Approving Certification to the Trustee of the Completion of Improvements related to the Series 2004A and Series 2004B Water and Sewer System Revenue Bonds (Stephen Winters)

REGULAR AGENDA

Discussion and Action

7:10 PM

4. Request to Proceed with Implementation of Recommended Final Plan for Active Forestry Management at Cane Creek Mitigation Tract (Patrick Davis)

7:30 PM

5. Approval of OWASA's Strategic Plan (Ed Kerwin/Randy Kabrick)

Information and Reports

8:00 PM

6. Verbal Update on the Mason Farm Wastewater Treatment Plant Hydraulic and Treatment Capacity Study (Vishnu Gangadharan)

Draft

ORANGE WATER AND SEWER AUTHORITY

MEETING OF THE BOARD OF DIRECTORS

FEBRUARY 25, 2010

The Board of Directors of the Orange Water and Sewer Authority (OWASA) held a regular Business Meeting on Thursday, February 25, 2010, at 7:00 P.M., at the Chapel Hill Town Hall.

Directors present: Randy Kabrick, P.E., Chair; Gordon Merklein, Vice Chair; Fred Battler; Joyce C. Preslar Alan Rimer and William R. Stott. Board members absent: Braxton Foushee, Secretary; and Michael A. (Mac) Clarke.

OWASA staff: Ed Kerwin; John Greene; Mason Crum; Patrick Davis; Greg Feller; Ed Holland; Heidi Lamay; Andrea Orbich; Dan Przybyl; Kevin Ray; Stephen Winters; and Robert Epting, Esq., Epting and Hackney.

Others present: Ben Poulson, Associate Director of Energy Services and Meg Holton, Water, Wastewater, and Stormwater Manager of the University of North Carolina at Chapel Hill; Harlan Hall, Jason M. Allen and Danny Ray of the N.C. Wildlife Resources Commission; and Craig Benedict, Orange County resident.

There being a quorum present, Chair Randy Kabrick called the meeting to order.

MOTIONS ACTED UPON

1. Alan Rimer made a motion to approve the Minutes of the January 14, 2010 Board meeting; the motion was seconded by William Stott and carried by unanimous vote.
2. Alan Rimer made a motion to approve the Minutes of the January 28, 2010 Public Hearing and Board meeting; the motion was seconded by William Stott and carried by unanimous vote.
3. Fred Battle made a motion to adopt and modify the hunting schedule and allowable number of State permits for archery hunting of deer on the OWASA Mitigation Property; authorize the Executive Director and General Counsel to modify the agreement with N.C. Wildlife Resources Commission; and requested staff to provide a report to the OWASA Board of Directors on the hunting activities after the 2010 season. The motion was seconded by William Stott and unanimously approved.

ITEM ONE: ANNOUNCEMENTS

CONFLICT OF INTEREST

Randy Kabrick said any Board Member who knows of a conflict of interest or potential conflict of interest with respect to any item on the agenda tonight is asked to disclose the same at this time. There were none.

MARCH 11, 2010 OWASA WORK SESSION

Randy Kabrick said that the OWASA Board meeting scheduled for Thursday, March 11, 2010 has been canceled. In its place a Board Work Session will be held with staff at 5:30 P.M. in the OWASA Community Room to discuss strategic planning.

MARCH 22, 2010 CHAPEL HILL TOWN COUNCIL MEETING

Randy Kabrick said that the Chapel Hill Town Council invited OWASA Board appointees to attend the Council's business meeting on Monday, March 22, 2010 to answer Council Members' questions on OWASA's draft Long-Range Water Supply Plan. All Board members are welcome to attend. The Board will request questions in advance of the meeting so that the Board will be prepared to answer the Council's questions.

COMMITTEE MEETING

Alan Rimer, Chair of the Board's Natural Resources Technical Systems Committee, said the Committee met on February 8th and discussed the feasibility of installing radio read water meters and plans for a conference on biosolids management forum which will be held in April at North Carolina State University. Once the biosolids forum is confirmed, Mr. Rimer requested staff post the information on OWASA's website.

ANNUAL CHLORINE DISINFECTION

John Greene announced that the annual chlorine disinfection of drinking water will begin on March 1, 2010 and will continue through the end of month. Chlorine disinfection ensures a high level of disinfection in the community's network of water mains.

ITEM TWO: PETITIONS AND REQUESTS

Randy Kabrick asked for petitions from the public, the Board and staff; there were none.

ITEM THREE: 2009 ANNUAL RECREATION REPORT FOR UNIVERSITY LAKE AND CANE CREEK RESERVOIR

The Board received this report as an information item.

ITEM FOUR: SEMIANNUAL PERFORMANCE MEASUREMENT REPORT THROUGH FISCAL YEARS 2006-2010

The Board received this report as an information item.

ITEM FIVE: MINUTES

Alan Rimer made a motion to approve the Minutes of the January 14, 2010 Board meeting; the motion was seconded by William Stott and carried by unanimous vote. Please see Motion No. 1 above.

Alan Rimer made a motion to approve the Minutes of the January 28, 2010 Public Hearing and Board meeting; the motion was seconded by William Stott and carried by unanimous vote. Please see Motion No. 2 above.

ITEM SIX: DISCUSSION OF REQUEST BY N.C. WILDLIFE RESOURCES COMMISSION (WRC) TO MODIFY HUNTING SCHEDULE ON OWASA MITIGATION PROPERTY

Mr. Craig Benedict, an Orange County Resident adjacent to the mitigation property, stated that he prefers the current hunting schedule and did not agree with the proposed changes to the hunting schedule.

Robert Epting suggested that after the new hunting schedule and agreement is in place, the Board may wish to review this information to ensure that the new schedule is accommodating to the interests of the parties and neighbors.

After discussion, Fred Battle made a motion to adopt and modify the hunting schedule and allowable number of State permits for archery hunting of deer on the OWASA Mitigation Property; authorize the Executive Director and General Counsel to modify the agreement with N.C. Wildlife Resources Commission; and requested staff to provide a report to the OWASA Board of Directors on the hunting activities after the 2010 season. The motion was seconded by William Stott and unanimously approved. Please see Motion No. 3 above.

ITEM SEVEN: REPORT BY THE FINANCE COMMITTEE REGARDING THE FISCAL YEAR 2011 BUDGET PROCESS

Gordon Merklein, Chair of the Board's Finance Committee, said that the Committee reviewed the Fiscal Year 2011 Draft Operations and Maintenance and 15-year Capital Improvements Program budgets. The Finance Committee will meet on March 25, 2010, to review financial projections that will include consideration of changes in water and sewer rates.

ITEM EIGHT: VERBAL UPDATE ON THE FORESTRY COMMUNITY MEETING HELD ON WEDNESDAY, FEBRUARY 24, 2010

Draft

Patrick Davis gave an update on the public comments received at the Forestry Management Community Meeting held on February 24, 2010. The purpose of that meeting was to provide information to and receive feedback from interested citizens and adjacent property owners regarding the proposed active forestry management plan for the Cane Creek Mitigation Property. Mr. Davis stated that key concerns received relate to the need to: protect buffers along property boundaries; reduce off-site impacts from the active forestry management measures proposed for the land; and keep property owners and other interested parties fully informed of our plans and timetable for forestry activities on the property. He said that staff expects to submit the revised forestry management plan for Board consideration in late-March or April.

ITEM NINE: BOARD DISCUSSION ON PAPERLESS AGENDA AND OTHER BOARD DOCUMENTS

Without objection, the Chair Board moved this item to the next regularly scheduled Board meeting when more Board members are available to discuss this item.

There being no further business to come before the Board, the meeting was adjourned at 7:46 P.M.

Respectfully submitted,

Draft

Andrea Orbich
Executive Assistant/Clerk to the Board

AGENDA ITEM

- RESOLUTION AUTHORIZING EXECUTIVE DIRECTOR TO RENEW PUBLIC OFFICIALS & EMPLOYEES LIABILITY INSURANCE FOR A ONE YEAR PERIOD FOR \$2,000,000 OF COVERAGE WITH NATIONAL UNION FIRE INSURANCE COMPANY OF PITTSBURG, PA

BACKGROUND

- To mitigate the risk of legal liability of Board Members and Staff for actions taken on behalf of OWASA, OWASA carries Public Officials and Employees Liability Insurance.
- We have received a quote through Dominick Huckabee Noblin & Trent (DHN&T) from National Union Fire Insurance Company of Pittsburg, PA. The quoted policy is for \$2,000,000 of coverage at a premium of \$25,004. The protection is the same as was in place for FY2010 and the premium is \$695 less than the current year's premium.

ACTION NEEDED

- Renew the Public Officials and Employees Liability Insurance coverage with National Union Fire Insurance Company of Pittsburg, PA prior to the expiration date of April 20, 2010 to maintain continuity of coverage.

RECOMMENDATION

- Award the renewal of the Public Officials and Employees Liability Insurance coverage to National Union Fire Insurance Company of Pittsburg, PA through DHN&T for \$2,000,000 of coverage, at an annual premium of \$25,004 for the period of April 20, 2010 through April 20, 2011.


March 25, 2010



ORANGE WATER AND SEWER AUTHORITY

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MEMORANDUM

TO: Board of Directors
THROUGH: Ed Kerwin 
FROM: Jan Bryant-Berry
DATE: March 16, 2010
SUBJECT: Renewal of Public Officials Liability Insurance

OWASA's current public officials liability insurance coverage expires April 20, 2010. This coverage has been obtained through George Williams, CPCU since 1977. Mr. Williams has passed away and Dominick Huckabee Noblin & Trent Insurance Agency has assumed Mr. Williams' business.

National Union Fire Insurance Company of Pittsburg, PA will provide the coverage with a policy limit of \$2,000,000 and a \$15,000 deductible for \$25,004; a \$695 decrease from last year.

There has never been a claimed filed against this coverage and we believe that the \$2,000,000 limit currently proposed provides adequate protection for our officials. AM Best has assigned ratings of "A" (Excellent) to National Union Fire Insurance Company for financial strength; indicating a secure fiscal position, and "a" (Excellent) for its credit worthiness. National Union Fire Insurance Company is a pooled entity with access to more than \$2.0 billion in financial assets. Staff recommends the Board of Directors approve the renewal of our public officials liability insurance with National Union Fire Insurance Company of Pittsburg, PA at the limits currently offered.



Jan Bryant-Berry
Procurement Manager

**RESOLUTION AUTHORIZING EXECUTIVE DIRECTOR TO RENEW PUBLIC
OFFICIALS AND EMPLOYEES LIABILITY INSURANCE FOR A ONE YEAR
PERIOD FOR \$2,000,000 OF COVERAGE WITH NATIONAL UNION FIRE
INSURANCE COMPANY OF PITTSBURG, PA**

WHEREAS, Orange Water and Sewer Authority has carried Public Officials & Employees Liability Insurance continuously since 1977; and

WHEREAS, a quote has been received from National Union Fire Insurance Company of Pittsburg, PA, for \$2,000,000 of coverage, at an annual premium of \$25,004; and

WHEREAS, it is to the advantage of the Authority to maintain continuity of coverage;

NOW, THEREFORE, BE IT RESOLVED:

1. That Orange Water and Sewer Authority obtain Public Officials and Employees Liability Insurance coverage through National Union Fire Insurance Company of Pittsburg, PA for a period of one year effective April 20, 2010, for \$2,000,000 of coverage, at a total premium of \$25,004 through Dominick Huckabee Noblin & Trent Insurance Agency.

2. That the Executive Director be, and he hereby is, authorized and directed to renew the Public Officials and Employees Liability Insurance Policy.

Adopted this 25th day of March, 2010.

Randy Kabrick, P.E., Chair

ATTEST:

Braxton Foushee, Secretary

AGENDA ITEM

- **RESOLUTION APPROVING CERTIFICATION TO THE TRUSTEE OF THE COMPLETION OF IMPROVEMENTS RELATED TO THE SERIES 2004A AND SERIES 2004B WATER AND SEWER SYSTEM REVENUE BONDS**

PURPOSE

- To provide certification to the Trustee that improvements funded by the Series 2004A and Series 2004B Water and Sewer System Revenue Bonds have been completed.

BACKGROUND

- OWASA issued Series 2004A and 2004B Water and Sewer System Revenue Bonds to fund the construction of various water and sewer capital projects.
- Improvements funded by the Series 2004A and 2004B Water and Sewer System Revenue Bonds were complete as of July 1, 2009.
- Section 4.07 of OWASA's Amended and Restated Bond Order requires certification to the Trustee that the projects are complete.

ACTION NEEDED

- Adoption of the resolution approving the filing of a certificate with the Trustee certifying the completion of the bond funded improvements.

RECOMMENDATION

- Adopt the resolution approving the filing of a certificate with the Trustee certifying the completion of the bond funded improvements.

March 25, 2010



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MEMORANDUM

TO: Board of Directors

THROUGH: Ed Kerwin 

FROM: Stephen Winters

DATE: March 18, 2010

**SUBJECT: RESOLUTION APPROVING CERTIFICATION TO THE TRUSTEE OF
THE COMPLETION OF IMPROVEMENTS RELATED TO THE SERIES
2004A AND 2004B WATER AND SEWER SYSTEM REVENUE BONDS**

In June of 2004, OWASA issued approximately \$41.3 million in water and sewer revenue bonds to fund the upgrade and expansion of the Mason Farm Wastewater Treatment Plant, the renovation of OWASA's administration building and the construction and installation of various upgrades and improvements to the Jones Ferry Road Water Treatment Plant. As of July 1, 2009, construction of the improvements was complete. All bond proceeds have been withdrawn from the construction fund established under the Bond Order.

Section 4.07 of the Bond Order requires that we certify to the Trustee that the improvements are complete. The Bond Order specifies the language of the certification and requires the inclusion of an opinion of counsel that the assets are free from material claims.

While construction was complete for most of the improvements by 2006, construction at the Mason Farm Wastewater Treatment Plant continued through Fiscal Year 2009.

The certificate, once approved and signed, will be forwarded to the Trustee.



Stephen Winters, CPA
Director of Finance and Customer Service

**RESOLUTION APPROVING CERTIFICATION TO THE TRUSTEE OF THE
COMPLETION OF IMPROVEMENTS RELATED TO THE SERIES 2004A AND 2004B
WATER AND SEWER SYSTEM REVENUE BONDS**

WHEREAS, on November 29, 1993 Orange Water and Sewer Authority adopted a Bond Order which authorized and secured water and sewer system revenue bonds;

WHEREAS, said Bond Order was amended and supplemented on March 25, 1999 and April 22, 1999 to secure additional water and sewer system revenue bonds;

WHEREAS, said Bond Order was amended and restated on September 13, 2001;

WHEREAS, Section 4.07 of the amended and restated Bond Order requires notification by certificate to the Trustee that the capital projects have been completed;

WHEREAS, on June 17, 2004 Orange Water and Sewer Authority issued additional water and sewer system revenue bonds from which proceeds were placed with the Trustee in the Construction Fund;

NOW, THEREFORE, BE IT RESOLVED:

1. That the Board of Directors approves the filing of the attached certificate with the Trustee.

2. That the Trustee is instructed to close the Series 2004A and Series 2004B Construction Funds in accordance with Section 4.07 of the Bond Order.

Adopted this 25th day of March, 2010.

Randy Kabrick, Chair
Chair

ATTEST:

Braxton Foushee
Secretary



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March 25, 2010

Mr. Martin P. Henry, Vice President
The Bank of New York Mellon Trust Company, N.A.
Corporate Trust Division
10161 Centurion Parkway
Jacksonville, FL 32256

Re: **Orange Water and Sewer Authority
Certification of Completion of Project(s) Funded by Series 2004A and Series 2004B Water and
Sewer System Revenue Bonds**

With respect to the Project as described and defined in the Official Statements and Series Resolutions for Orange Water and Sewer Authority's Water and Sewer System Revenue Bonds, Series 2004A and 2004B, Orange Water and Sewer Authority (OWASA) certifies the following as of March 25, 2010:

- The cost of the Project was \$59,022,964.
- All costs and expenses incurred in connection therewith have been paid.
- The acquisition, construction and equipping of the Project have been completed substantially in accordance with the plans and specifications therefore.
- All other facilities necessary in connection with the Project have been acquired, constructed and installed in accordance with the plans and specifications therefore.
- Notwithstanding the foregoing, this certification is given without prejudice to any rights against third parties that exist at the date of such certification or that may come into being.

Stephen Winters, CPA
Director of Finance and Customer Service

Date

Further, it is the opinion of counsel to OWASA, that OWASA has acquired title to all property, lands, property rights, rights of way, franchises, easements and other interests in lands necessary for the operation of the Water and Sewer System, free from all liens or encumbrances except liens, encumbrances or other defects of title which do not have a materially adverse effect upon OWASA's right to use such properties for the purpose intended or which have been adequately guarded against by a bond or other form of indemnity, and that there are no uncanceled mechanics', laborers', contractors', or materialmen's liens on the Improvements or on file in any public office where the same should be filed in order to be valid liens against any part of such property, and that the time within which such liens can be filed has expired.

Robert Epting, Esquire
General Counsel for Orange Water and Sewer Authority

Date

AGENDA ITEM

- **REQUEST TO PROCEED WITH IMPLEMENTATION OF RECOMMENDED FINAL PLAN FOR ACTIVE FORESTRY MANAGEMENT AT CANE CREEK MITIGATION TRACT**

PURPOSE

- To request the Board of Directors' approval for staff to implement the forestry management plan (initiate active forestry management measures) for the 490-acre Cane Creek Reservoir Mitigation Tract (the Buckhorn Game Land tract).

BACKGROUND

- The Board of Directors previously concurred with staff's recommendation that we develop a Forest Stewardship Plan to ensure sustainable management of our forest lands.
- The North Carolina Wildlife Resources Commission (NCWRC) developed a Forest Management Plan for the Cane Creek Mitigation Tract to help ensure forest health and diversity, the conservation of wildlife, and opportunities for public outdoor recreation on that tract.
- OWASA's forestry consultant, True North Forest Management Services, prepared a proposed implementation plan and general timetable for active forest management measures to accomplish the NCWRC's recommendations.
- On February 24, 2010 OWASA held a Community Meeting for the purpose of providing information and receiving questions and comments from nearby landowners and other interested parties regarding the proposed forestry plan for the Cane Creek Mitigation Tract.
- We have considered the comments received, and requested the Board's approval to proceed with implementation of the active forestry management measures for the Cane Creek Mitigation Tract.

ACTION NEEDED

- Board consideration of the attached draft resolution which, if adopted, would authorize the Executive Director to implement the plan for active management of the forest resources on the Cane Creek Mitigation Tract.

RECOMMENDATION

- The Natural Resources/Technical Systems Committee and staff recommend adoption.

March 25, 2010




ORANGE WATER AND SEWER AUTHORITY

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MEMORANDUM

TO: Board of Directors

THROUGH: Ed Kerwin 

FROM: Patrick Davis

DATE: March 19, 2010

SUBJECT: Request to Proceed With Implementation of Recommended Final Plan for Active Forest Management Activities at Cane Creek Mitigation Tract (also called the Buckhorn Game Land)

Purpose:

Request the Board's approval for staff to implement the forest management plan for the 490-acre Cane Creek Mitigation Tract.

Background:

On January 14, 2010 the Board of Directors authorized a public information/discussion process regarding our long-term forest stewardship plans and True North Forest Management Services' and the North Carolina Wildlife Resources Commission's (NCWRC) specific recommendations for active management of the Cane Creek Mitigation Tract to ensure that the public is aware of and has the opportunity to comment on our plans.

Staff's outreach efforts included the following:

- (a) A letter was mailed to all property owners (about 120) within 2,000 feet of the Cane Creek Mitigation Tract informing them of our plans; inviting them to our February 24, 2010 Community Meeting, and informing them of other avenues for providing comments/concerns they might have if they were unable to attend the meeting.
- (b) We conducted a Community Meeting where the general public, interested stakeholders, and Orange County staff were invited to hear from OWASA staff, OWASA's consulting forester, and forestry and wildlife experts from the NCWRC, North Carolina Division of Forest Resources (NCDNR) and Duke Forest, to gain a better understanding of the science that is the basis for this initiative.
- (c) The Chair of the OWASA Board sent a letter to the chief local elected officials informing them of our plans to sustainably manage our forest resources while ensuring protection of the quality and quantity of our community's essential drinking water supply (also copied to the Town and County managers).

- (d) We provided information to the general public regarding our plans through our website and an electronic news release.

Concerns/Questions Raised by the Public:

We received several questions and comments from the public at the February 24, 2010 Community Meeting, at the January 14, 2010 Board meeting, and via e-mail. A summary of those questions and comments and our responses is included as Attachment #1.

As recommended by Craig Benedict, who lives adjacent to the Cane Creek Mitigation Tract and is the Orange County Planning Director, we also requested and received the Orange County Planning Department's assistance in conducting a field review of the Mitigation Tract to identify perennial and intermittent streams for which buffers would be required if the land were going to be developed.

We have considered the questions, comments, and technical information received and believe that the issues and concerns raised can be adequately addressed through careful and responsible management of forestry activities on the Cane Creek Mitigation Tract.

Staff Recommendation:

True North has prepared a revised plan, which is included as Attachment #2. Technical changes from the prior plan are shown in "track changes" mode. There are no major changes to the active forestry management measures included in the draft plan that was provided to the Board of Directors for discussion at the January 14, 2010 meeting.

The revised plan was discussed with the Natural Resources and Technical Systems Committee on March 18, 2010. The Committee concurred with staff's recommendation to proceed.

Staff requests the Board's approval to proceed with active and sustainable forest management activities on the Cane Creek Mitigation Tract as recommended by True North and the NCWRC. A draft resolution in support of the recommendation is included as Attachment #3.

Next Steps:

If and when the Board authorizes staff to proceed, the next steps will be:

- 1. Field Work and Contract Support by Our Consulting Forester:** True North would complete the field work (marking trees, flagging boundaries and stream buffer zones, etc.) necessary to prepare those areas that will be managed in the near term. Upon completion of field work, True North would prepare an "Invitation to Bid" that would outline the objectives of the active management plan, describe the timber to be sold, review best management practices to be followed, and cover other conditions and terms of the timber sale. The Invitation to Bid would also include a map outlining the work area and buffer zone

boundaries. True North would invite timber buyers to bid on the active management plan outlined in the Invitation to Bid.

- 2. Timber Contract Award:** True North would assist OWASA staff in evaluating bid offers, preparing and awarding the contract, and meeting with the successful bidder to review the management guidelines, work area and buffer zone boundaries, and timber sale and performance expectations.

Contracts for timber harvesting are a service; therefore, under current policy, the Board's approval is not required.

- 3. Inform Nearby Landowners and Interested Parties:** We would keep nearby landowners and other interested parties informed of our plans and schedule for active forest management measures at the Cane Creek Mitigation Tract.

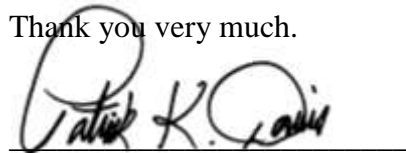
- 4. Commence Active Management:** True North would monitor the harvesting activities regularly and enforce the timber sale contract to ensure the contract objectives and conditions are met. Upon completion of harvesting activities, True North would coordinate site preparation and oversee the site management and reforestation measures as recommended in the plan.

(As previously discussed with the Board, concurrent with this effort True North is preparing a sustainable forestry management plan for our other major land holdings. The draft plan is expected to be completed around June, 2010.)

We look forward to the Board's questions and discussion regarding staff's and our consultant's and State agencies' recommendations for sustainable management of the forest resources on the Cane Creek Mitigation Tract.

We also express our appreciation to the staff of the NCDFR, NCWRC, Duke Forest, and True North for their technical expertise and assistance.

Thank you very much.



Patrick Davis
Sustainability Manager

Attachments

**SUMMARY OF QUESTIONS AND COMMENTS RECEIVED FROM THE
PUBLIC REGARDING OUR FORESTRY MANAGEMENT PLANS
AND OWASA STAFF RESPONSES**

(March 19, 2010)

Background:

OWASA is developing a sustainable forestry management plan for nearly 2,300 acres of OWASA forest land, and has retained True North Forest Management Services to prepare the plan. As a first step in this effort, True North has developed a recommended plan for active forest management at the 490-acre Cane Creek Mitigation Tract located north of Cane Creek Reservoir. Implementation of the plan would help achieve the NC Wildlife Resources Commission's (NCWRC) recommendations to actively manage the forest resources to improve wildlife habitat, forest health, and recreational opportunities at the Mitigation Tract, which is enrolled in the NCWRC's Public Game Lands program.

The OWASA Board of Directors directed that a public information and discussion process be implemented to ensure that public is aware of and has the opportunity to comment on our plans. The public outreach effort has included a February 24, 2010 Community Meeting, direct mailings to about 120 adjacent landowners, and distribution of information through an electronic news release and OWASA's website.

We received several questions and comments from the public at the February 24, 2010 Community Meeting, at the January 14, 2010 Board meeting, and via e-mail. A summary of those questions and comments and our responses is provided below. Questions raised at the Community Meeting were responded to verbally at the meeting consistent with the responses shown below.

Major Questions and Concerns Raised by the Public, and the OWASA Staff Response:

1. Questions were asked about the size and adequacy of the stream buffers planned for the site.

Staff Response: OWASA will meet or exceed the recently adopted Jordan Lake Rules regarding stream buffers. The forest management plan for the Cane Creek Mitigation tract proposes approximately 137 acres of buffered area, as compared to the approximate 43 acres that would be required by the Jordan Lake Rules (includes buffering approximately 25,000 lineal feet of stream as compared to the approximate 17,000 lineal feet required by the Jordan Lake Rules).

2. A comment was received that OWASA should request the Orange County Planning staff conduct a field review of the Mitigation tract to identify perennial and intermittent streams for which buffers would be required by Orange County if the land were going to be developed.

Staff Response: We requested that field review and have received the County staff's report. We have considered the results of that evaluation as we finalized our plans. The County

staff report estimated about 98 acres of land is within 80 feet from identified intermittent and perennial streams (in other words, if the site was being developed as residential lots/homes, the County would have jurisdiction and they would require approximately 98 acres of stream buffer). As noted above, True North's proposed plan recommends 137 acres of buffers, which is nearly 40% more area than identified by the County.

3. A comment was received indicating that the property owners adjacent to the portion of OWASA's property that closely approaches Buckhorn Road have no intention of granting any temporary or permanent access agreements to OWASA that would allow access to the Mitigation Tract from that area of Buckhorn Road.

Staff Response: Access to Buckhorn Road, while beneficial, is not essential for implementation of the recommended forestry management activities.

4. Questions were posed as to why the site was not being further developed (trails, parks, etc.) to provide additional recreational activities for the citizens of Orange County.

Staff Response: Our plans are focused on protecting water quality, improving the natural environment and managing the forest resources. People with suggestions and recommendations for recreational improvements to this site or on any other OWASA-owned property should present those to the OWASA Board of Directors.

5. It was requested that OWASA consider providing a buffer along the property lines of adjacent property owners.

Staff Response: Actual field conditions will dictate the need for and type of buffers along property lines and major thoroughfares. If thinning (rather than clear-cutting) is being conducted, we would likely have no buffers. In areas where clear-cutting is required and the area can be observed from an adjacent home, we will provide no less than 50 foot buffers (unless it clearly makes sense to remove unattractive and/or heavy Virginia pine areas because of their high susceptibility to blow downs, etc.).

6. Questions were asked about why it was necessary to actively manage forest lands rather than allowing nature "to take its course" and why certain trees would be harvested while others would be allowed to remain.

Staff Response: The experts (staff North Carolina Division of Forest Resources (NCDFR), NCWRC and Duke Forest) that OWASA has relied heavily upon during development and review of the forest management plan for the Mitigation tract have explained that active forest management is necessary to correct past actions that have been taken which degraded the forest environment (such as going onto a tract of land and removing the high quality trees and leaving those less desirable specimens behind to prosper) and taking certain actions to replicate certain natural events (such as using controlled burning of the understory to replace the "natural" wildfires that once were relatively common and which can improve soil conditions). One of the basic precepts behind modern forestry is to remove less desirable trees (crooked, diseased, overly mature or less desirable species such as

maple, beech and sweetgum) so that healthy trees and more desirable species (such as oak, hickory, pine and poplar) can regenerate and prosper. It was also pointed out that modern forestry practices do not preclude any particular species from regenerating and prospering, instead it simply makes the environment more conducive for those more desirable species to dominate the site and works with the stand's natural ability to restore itself.

7. Concerns were expressed about the potential hazards associated with controlled burns.

Staff Response: The technical experts that OWASA has and will continue to rely heavily upon have stated that these intentional burns are well planned and tightly controlled to significantly reduce the chance of the fire spreading and to minimize adverse impacts from off-site smoke, etc. Fire weather data (wind speed and directions, relative humidity, fuel moisture, temperature, etc.) will be collected and evaluated prior to any controlled burn to determine the safest and most efficient burning times and conditions. During the controlled burning operation all the necessary fire suppression equipment will be on site. Any break-overs can be quickly controlled with equipment already on site. These controlled burns reduce the amount of "accumulated fuel" in the forest, so they actually reduce the chance of damaging wildfires overtaking surrounding properties. Dr. Edeburn from Duke Forest stated that they regularly conduct controlled burns and that his staff would be pleased to have members of the public view one of their active burns and visit other sites that have benefitted from a controlled burn.

OWASA staff also made it clear that any controlled burns will be closely coordinated with the NCDNR and that notice will be made (including temporary signage) informing surrounding property owners of OWASA's intentions and so that casual passersby do not become unnecessarily alarmed.

8. A concern was expressed that clear-cutting forested areas might increase the amount of runoff from significant rain events in those areas.

Staff Response: The NCDNR Water Quality Staff Forester with overall responsibility for development of the State's Best Management Practices for forestry stated that while there may be some temporary increase (3-5 years) in runoff, it would be insignificant and probably not even perceptible by those citizens living around the area. He also highlighted that the topography of the Mitigation tract is such that any runoff would have multiple routes of "escape" and it would be far less of a problem in Orange County than it would be in more mountainous terrain (such as in the western portions of North Carolina).

9. A comment was received that certain areas identified in the attached plan (that have been heavily damaged by prior destructive weather events) should be cleared and replanted.

Staff Response: We have been advised that reforestation of the blown down areas (Parcel D) is not practical; therefore, our plan will be to let these areas develop naturally and when the new trees reach a certain size we will evaluate whether a crop tree release would help to improve the quality of the naturally regenerated stand.

10. A comment was received that OWASA should clear all debris piles as part of its active management efforts.

Staff Response: Our goal will be to distribute logging debris as well as possible throughout any area where active management activities are accomplished. Most of the large hardwoods will be topped where they are felled, because dragging an un-topped hardwood through a thinned area would pose significant risk for damage to the residual stand. However, there will be areas where logging debris will be concentrated as necessary to facilitate our reforestation efforts. In any event we will make every attempt to strategically locate these debris piles to minimize their negative visual impact until they degrade naturally.

11. A comment was received that there is a second old home site that should be preserved on the Mitigation tract.

Staff Response: We are aware of the second home site, and our intentions for this particular site were identified in the draft plan under Parcel F. This was not identified on the original map. We have revised the maps that will be used for managing the tract, and this old home site will be protected.

12. A comment was received regarding the number of trees per acre that should remain after a “thinning” is conducted.

Staff Response: Conditions observed on the ground during our consulting forester’s survey and subsequent marking will dictate the number of high quality trees that will remain in all areas we intend to manage.

13. A citizen that lives in close proximity to the Cane Creek Reservoir (not the Mitigation tract) asked why OWASA had allowed a large clear-cut on private property in close proximity to the Cane Creek Reservoir.

Staff Response: The Orange County Ranger with NCDNR stated that these actions were taken on private property and that OWASA does not have jurisdiction over the harvesting activities that occurred. He also stated that he had visited the site 22 times during the harvest and that all activities were conducted in full compliance with NCDNR’s Forestry Practice Guidelines and Best Management Practices, and that the NCDNR was still actively working with the property owners in an effort to get them to conduct a replanting. It was also highlighted that OWASA’s forest stewardship activities have dramatically different objectives than those of the private landowner.

14. A citizen questioned OWASA’s objective that its forest management activities be managed so that they are no less than cost neutral.

Staff Response: OWASA’s mission is to provide water and sewer services to its customers, and as a result, we do not believe it would be appropriate to have our customers incur additional costs associated with our efforts to improve management of our forest lands.

15. A concern was expressed about the noise and other disturbances that would be associated with active forest management activities.

Staff Response: Our consulting forester advised that any noise and disturbance would be limited in duration, as it will likely take only about 3 to 4 weeks to conduct timber thinning and clearing on the approximately 60 acres planned to be managed as part of Phase I for the Mitigation tract. The on-site crew during Phase I would probably consist of only about 4 to 5 people. OWASA staff has informed nearby property owners that we will keep them informed of our plans and scheduled activities, but that weather and the corresponding soil conditions will dictate when, where, and how long active forest management work will be performed.

16. A question was posed as to whether there was any linkage between the management activities on the Mitigation tract and the Mountains-to-Sea Trail.

Staff Response: OWASA staff has been involved in planning for the Mountains-to-Sea Trail, but is unaware of any linkage between that and the Mitigation tract.

17. A question was posed as to what actions would be taken to prevent damage to the property of surrounding property owners.

Staff Response: Any contracts entered into would include provisions for clear contractor liability in the event damage occurs and special precautions would be taken to prevent any ancillary damage. OWASA staff has received contract language information from Duke Forest that will be incorporated into the contract provisions used for active management of OWASA-owned lands. True North's standard timber contract also contains specific contractor liability conditions in event of damage to adjoining property.

18. Concern was expressed about whether OWASA's plan includes taking action to control invasive species on the tract.

Staff Response: A NCWRC representative commented that many of the invasive plant species present on the Mitigation tract are very difficult, if not impossible, to totally control. OWASA's consulting forester commented that invasive species control would be considered as part of management of all OWASA-owned properties but only if practical and economically feasible. Resource agencies' experts have advised that controlled burns would bring some positive results and should encourage the establishment of more native vegetation.

19. A comment was received that OWASA should consider some natural regeneration for pine stands (seed tree cut etc.) in addition to planting.

Staff Response: Natural regeneration of pine stands is an option that may be considered, but our consulting forester feels that tree planting is a better option because it will take advantage of the improved tree genetics of nursery seedlings and that they will be planted at

a spacing designed to create optimum growing conditions. Naturally regenerated stands tend to be overstocked (too many trees per acre) and if not corrected early will develop in thick, slow growing, poor yield stands. The other issue is that quite a few of the pine stands we are harvesting are Virginia pine, which we would like to convert to higher quality loblolly and Shortleaf pine stands. Natural regeneration of pine is most practical in smaller openings, where natural reseeding will most likely occur anyway from the surrounding loblolly and Shortleaf pine seed trees. In these cases we can manage for natural regeneration of these pine species, with the plan of coming back within the first eight to ten years to conduct some pre-commercial thinning to correct the overstocked conditions of the naturally regenerated pine stands. True North does not normally recommend seed tree harvests for pine, because the timber value of the seed trees usually exceeds the cost to plant pine seedlings.

20. Comments were received indicating that surrounding property owners want to be kept informed of OWASA's intentions regarding forest management activities at the Mitigation Tract.

Staff Response: *We have informed adjacent landowners and other interested parties that we will keep them informed of our efforts and schedule of activities for the Mitigation Tract. We have developed an e-mail distribution list for this purpose (it includes e-mail addresses from all those that have provided comments, attended the Community Meeting, plus key staff from Orange County).*



To: Orange Water Sewer Authority and North Carolina Wildlife Resources Commission
From: David Halley, RF #1428
Subject: Harvesting Plan for Buckhorn Game Land (Mitigation Tract)
Date: October 23, 2009 ([Revision March 11, 2010](#))

The Buckhorn Game Land is a ± 490 acre property owned by the **Orange Water and Sewer Authority (OWASA)** and is located on the west side of Buckhorn Road and south of Mt. Willing Road in Orange County, North Carolina. The property was purchased by OWASA to mitigate habitat loss from the construction of the Cane Creek Reservoir. As a condition of Federal approval of the reservoir, OWASA enrolled the property in its coordinating with the North Carolina Wildlife Resources Commission's (NCWRC) public game lands program. OWASA and NCWRC are collaborating to manage the property for endemic wildlife species and to offer opportunities for public outdoor recreation, particularly hunting.

Active and sustainable management of the forest resources on the property will be key to achieving those objectives. The mForestry management willefforts should reflect a multiple-use approach and specific efforts willshould focus on improved wildlife habitat, enhanced timber quality and production, protection of aesthetics, enhanced recreational opportunities, and protection of water quality and soil productivity. The intentgoal willshould be to create a mosaic of interconnected management units that are bound by good land stewardship. By adhering to this management philosophy, the land will become more productive and land management goals will be successfully met.

A Forest Management Plan for the Buckhorn Game Land was prepared by Daniel Ray, Forest Stewardship Biologist with the NCWRCorth Carolina Wildlife Resources Commission, in May of 2009. Mr. Ray's plan recommends several different timber harvesting and forest management options to help OWASA reach their management objectives. Most of the timber harvesting outlined in his plan focuses on selective forest improvement thinnings of Loblolly/Shortleaf pine stands and upland hardwood stands. The objective of the selective forest improvement thinning will be to remove selected trees in order to improve the vigor, quality, and future income potential of trees that have been left. These thinning will concentrate on removing the smallest trees, the poorest quality trees (crooked, forked, broken), diseased trees, and/or ones that are growing too closely together to improve spacing. This intensive culling will reduce the overall stocking and will subsequently promote more favorable growing conditions for the remaining higher-quality trees. These thinnings will also promote better wildlife habitat, by encouraging vegetative growth in the mid- and understory.

DAVID P. HALLEY
Registered Forester

There are also areas on the property where he has recommended final harvests, mostly on Virginia pine stands. Final harvests are recommended for your Virginia pine forests due to their poor timber quality and low wildlife habitat value. Recent storms and Hurricane Fran in 1996 have also littered these stands with dead-fallen trees. A complete harvest of the Virginia pine stands will enable the stands to be cleared so that they may be site prepared and reforested to more productive Shortleaf pine or loblolly pine following harvest.

True North Forest Management Services has been hired by OWASA to develop a detailed Timber Harvest Plan for the Buckhorn property. The staff of True North has reviewed the recommendations outlined in Mr. Ray's plan and [we](#) have visited the site to create a detailed timber harvest map and prescription for each of the different [forest stands on the property management parcels](#). ~~This plan is being submitted to get your feedback and approval of each~~ [This plan describes each management prescription and the proposed time table for implementation](#). ~~We would then like to set up a meeting with you to review the plan and address your concerns or changes.~~

[Several key management measures will be common throughout the entire tract, and are essential for minimizing impacts on the environment and adjacent landowners. These are:](#)

1. Protection of Riparian Buffers

[Protection of riparian buffer areas on the tract is essential for water quality protection. Through field investigation and review of high resolution topographic maps, we have identified riparian buffer areas in which timber removal should either not occur or only be conducted if essential to control disease, insect damage, etc. Our plan identifies about 137 acres of buffer area that should be protected, including riparian buffers along about 25,000 lineal feet of stream. The proposed riparian buffer widths are a minimum of 50 feet; however, in some areas they are substantially wider.](#)

[Our recommended riparian buffer area is significantly greater than that required under the State's Jordan Lake watershed riparian buffer rules, which may require up to an 80-foot wide buffer area along perennial and intermittent streams. The State rules apply to about 17,000 feet of streams on the property, and cover about 43 acres of the tract. The rules do allow certain forestry management activities within the required buffer zone.](#)

[At OWASA's request, the Orange County Erosion Control Division staff conducted a field evaluation of the property to identify perennial and intermittent streams and riparian buffer areas that would be required under Orange County regulations if the land were being developed as a residential subdivision or other similar purpose. The County provided a letter report to OWASA on February 2, 2010 and we have considered the results of that evaluation.](#)

The County report estimated about 98 acres of land within 80 feet from identified intermittent and perennial streams (in other words, if the site was being developed as residential lots/homes, the County would have jurisdiction and they would require approximately 98 acres of stream buffer). As noted above, our plan recommends 137 acres of buffers, which is nearly 40% more than identified by County staff.

We will flag and carefully monitor the riparian buffer areas to ensure that they are protected during timber harvesting activities on the property.

In upland areas where clear-cutting is required and the area can be viewed from an adjacent home, we propose that a 50-foot buffer be provided unless field conditions indicate otherwise. If tree thinning is to be conducted, we would not provide a buffer.

2. Expert Management of Low-Intensity Burning

The plan recommends the use of low-intensity burning to reduce the risk of damaging wildfires and to aid in forest regeneration. These burning events are carefully planned and tightly controlled by trained experts to significantly reduce the chance of fire spreading and to minimize the impacts from smoke, etc. Controlled burns will be closely coordinated with the North Carolina Division of Forest Resources, and advance notice should be provided to surrounding property owners.

3. Protection of Adjacent Properties

As noted above, we will protect adjacent properties by carefully controlling planned burning activities and by providing buffer zones for homes located adjacent to proposed clearcut areas. Property boundaries are marked and tree-cutting will be monitored to minimize the chance of damage to adjacent property. Contracts for timber services will include specific liability provisions in event of damage to adjoining property.

True North will work closely with OWASA staff to keep adjacent landowners and other interested parties informed as to our efforts and the schedule of forest management activities at the Cane Creek Mitigation tract.

Here is the basic harvest plan (See attached Harvest Plan for location of parcels):

Parcel A (gray):

Forest Type:	Hardwood
Acres:	<u>25 22</u>
Dominant Species:	White oak, red oak, hickory and yellow poplar
Diameter Range:	10 to 16 inches in diameter at breast height (DBH)
Age:	60 to 65 years
Growth Rate:	Fair to good
Stand Quality:	Very good
Basal Area:	70 to 90 square feet

Recommended Treatment (Parcel A):

We are recommending a light thinning of this stand in 2010. This thinning will concentrate on removing the smallest trees, the poorest quality trees (crooked, forked, broken), diseased trees, and/or ones that are growing too closely together to improve spacing. Scattered Virginia pine and loblolly pine will also be designated for removal. This intensive culling will reduce the overall stocking and will subsequently promote more favorable growing conditions for the remaining higher-quality hardwood trees. As we mark the stand we will be on the lookout for den trees and try to protect den trees for cavity nesting animals. We recommend marking the trees that will be taken during the harvest. True North will mark these trees with blue paint.

We also recommend the removal of some of the hardwood midstory to help improve the amount of sunlight that reaches the forest floor. By removing or felling the hardwood midstory we will hopefully promote more advanced regeneration of oak in the understory. This mid-story removal will concentrate on the removal of red maple, sweetgum, and American Hornbeam. Soft-mast producing species such as dogwood, blackgum, persimmon, and cherry will be left to provide berries for wildlife and songbirds.

In the Future: Following thinning we would like to run a low intensity understory burn beneath this stand. The understory burn will hopefully promote more oak regeneration by controlling thinned barked species such as sweetgum, maple, yellow poplar and beech.

Parcel B (pink):

Forest Type:	Riparian Forest Buffer
Acres:	112 137
Dominant Species:	White oak, hickory, red oak, red maple, yellow poplar, river birch, and willow oak
Diameter Range:	8 to 16 inches DBH
Age:	60 to 65 years
Growth Rate:	Very good
Stand Quality:	Fair to good
Basal Area:	70 to 90 square feet

Recommended Treatment (Parcel B):

This parcel represents the Stream Management Zone (SMZ) areas or Riparian Forest Buffers. The boundary of this SMZ will be flagged in day glow pink flagging. No timber harvesting will occur within the boundary of the SMZ. Trees should not be felled into or left within the SMZ areas. There should only be a couple of areas where logging equipment will have to cross or enter the SMZ. The timber sale contract will clearly identify SMZ boundaries and restrict all logging activity within the boundary of this buffer. All stream crossings will be designated and will be constructed to comply with North Carolina Forestry Best Management Practices for stream crossings. These stream buffers ~~should~~ will range from 50 to 150 in width ~~be at least 100 feet wide~~ on both sides of the stream.

Parcel C (green):

Forest Type: Pine
Acres: 25
Dominant Species: Mostly Virginia pine
Diameter Range: 12 to 14 inches DBH
Age: 80 to 85 years
Growth Rate: Very poor
Stand Quality: Poor
Basal Area: 70 to 120 square feet

Recommended Treatment (Parcel C):

This is a very low quality, poorly stocked stand of Virginia pine that we recommend for final harvest in 2010. Following harvest we recommend replanting the cutover in loblolly pine due to its excellent accessibility and gently slope (2 to 10 percent). These conditions will make it an easy site to conduct commercial thinning in the future. The site index of loblolly is 80 for this soil type. Shortleaf pine reforestation will be recommended for smaller areas on poorer sites and on areas with poorer accessibility.

Parcel D (red cross-hatched):

These areas represent the portions of the property ([11 acres](#)) where we mapped severe blow downs from Hurricane Fran. In these scattered areas almost all of the dominate trees were blown down during this severe storm event in 1996. These stands are currently thickets of natural regeneration of both pine and hardwood.

Recommended Treatment (Parcel D):

Leave to grow. In the future we will need to re-examine these grown up thickets and determine if we can do some crop tree release work when they are still young (15 to 17 years old) to release better timber and wildlife crop trees, such as oak, hickory, shortleaf or loblolly pine and yellow poplar. Right now we need let the stand to thin itself out through competition induced mortality. Crop tree management involves selecting 8 to 12 desirable trees per acre and felling any trees adjacent to that desirable tree to improve its growing space and improve its chance of becoming one of the dominant trees in the stand.

Parcel E (blue):

Forest Type: Pine
Acres: [98](#)
Dominant Species: Virginia pine with some loblolly pine
Diameter Range: 6 to 12 inches in diameter
Age: 30 to 35 years
Growth Rate: Good
Stand Quality: Poor
Basal Area: 100 to 120 square feet

Recommended Treatment (Parcel E):

This is another low quality Virginia pine stand we are recommending for final harvest in 2010. This is a younger stand than Parcel C, but it still is a very poor timber quality stand. Following harvest this stand should be reforested to loblolly pine at the same time as Parcel C and managed as one parcel following reforestation.

Parcel F (white):

This parcel represents a mature 70 to 80 year old mixed pine and hardwood forest stand surrounding an old home or cabin site. There are the remnants of a wooden foundation and an old stone/brick chimney. We would like to preserve a seven-acre area of mature forest around this old homesite. We recommend that this area be maintained for aesthetic, historic preservation, and wildlife habitat. We would only like to recommend a very light thinning in this area. Only very low quality or diseased trees would be marked for removal. The thinning should favor some of the larger oaks on this site.

This is also another old home site in Parcel K at the far eastern side of the property, near Buckhorn Road. There is also a stone chimney, old wooden foundation and old well at this site. This old home site should also be adequately protected. We also need to check the well to see if it is a safety hazard. If so we should look at capping it or covering it up.

Parcel G (orange):

Forest Type: Pine
Acres: 21
Dominant Species: Loblolly pine (60-70%), Virginia pine (20-25%), Shortleaf pine (5-10%)
Diameter Range: 12 to 22 inches in diameter
Age: 55 to 80 years
Growth Rate: Fair to good
Stand Quality: Fair to good
Basal Area: 100 square feet (A lot of holes in the canopy from storm damage)

Recommended Treatment (Parcel G):

For the most part we would like to leave this stand to grow. It is mature pine forest and could be harvested, but we would like to maintain this as a mature pine forest at this time. We may consider the removal of the mature Virginia pine and low quality hardwoods in this stand, and leave the rest of the pine stand. This is a forest we would really like to do some periodic understory burning in to improve its overall appearance and promote better wildlife habitat. There are also a lot of blown down trees in this forest stand, mostly Virginia pine. We would recommend a burn prior to a thin.

The harvesting of trees on this side of the creek is going to require a stream crossing and some road building. We are recommending that the initial timber harvest in 2010 occur on the north side of the creek (parcels A, C, E & F). We recommend that income generated from this harvest be utilized to construct an adequate stream crossing and a road system on the other (south) side of the creek to allow the removal of trees from the recommended harvest there. One of the streams that may require crossing would require

several large properly sized culverts or a timber bridge. We would need to discuss the construction of this crossing and road system with several contractors to get an estimated price for construction. We feel that with this infrastructure in place we could attract and demand a higher “per unit” price for the timber on this side of the creek. We also feel that a contractor-built quality road will meet the future needs of the property better than a temporary system constructed by the logging company. ~~We may have the ability to access this timber from a point close to Buckhorn Road in the northeast corner of the property but we will need to explore this option further. If we are able to obtain this access we could eliminate the need for the stream crossing.~~

Parcel H (red):

Forest Type: Pine
Acres: [28.27](#)
Dominant Species: Virginia pine (70%), with some loblolly pine and yellow poplar
Diameter Range: 10 to 14 inches in diameter
Age: 60 to 65 years
Growth Rate: Fair
Stand Quality: Poor to fair
Basal Area: 130 square feet

Recommended Treatment (Parcel H):

This represents four separate stands of mature Virginia pine that we are recommending for a final harvest in 2011 or following the construction of the stream crossing and road system. We recommend reforesting these cutovers to Shortleaf pine following harvest.

Parcel I (lime):

Forest Type: Pine/Hardwood
Acres: 14
Dominant Species: Loblolly pine (60-65%), Virginia pine (10-20%), yellow poplar (15-20%), and sweetgum/maple (10%)
Diameter Range: 14 to 18 inches in diameter
Age: 70 years
Growth Rate: Slow
Stand Quality: Good to very good
Basal Area: 120 square feet

Recommended Treatment (Parcel I):

Recommend a light marked thinning favoring loblolly pine and yellow poplar. This thinning would remove all the Virginia pine.

Parcel J (yellow):

Forest Type: Hardwood
Acres: ~~130~~ 127
Dominant Species: White oak, red oak, hickory, with some yellow poplar and pine.
Diameter Range: 10 to 16 inches
Age: 60 to 65 years
Growth Rate: Good
Stand Quality: Poor to fair
Basal Area: 80 to 100 square feet

Recommended Treatment (Parcel J):

Unfortunately past timber harvesting practices has exacted a toll on the quality and productivity of this hardwood stand. The forests growing on this stand are to a large extent a product of repeated cuttings through practices commonly called “high grading,” “diameter-limit cutting,” or “select cutting” where the best trees are continually harvested and the remaining non-marketable or defective trees are left. This harvesting practice has slowly degraded this stand. The timber currently growing here is not a very good representation of the quality forest that could be growing on these good soil sites. The current forest is slowly recovering but with proper forest management and use of silviculturally sound harvest practices we can speed up their recovery and restore the true values and yields of these stands.

The forest management of this stand will focus on restoration. First of all we recommend harvesting about twenty percent of this parcel (~~25~~ 35 acres) in the form of small group selection openings in 2011. We will limit the size of the group selection openings at 0.5 to 3 acres and we will locate them in the least productive parts of the forest stand. ~~We~~, We will also try to equally distribute these openings throughout the stand. Following harvest we will let these small openings regenerate naturally in hardwood re-growth and natural reseedling. It will be important to have clean openings to promote optimal growing conditions in these new stands. All trees greater than one inch in diameter within these openings will be harvested or felled. The boundaries of the small group selection openings will be flagged with blue flagging prior to harvest. Every eight years (2019, 2227, ...) we would like to harvest another 20% of this stand in sets of group openings. Within 40 years, after multiple re-entries to conduct additional group selection openings, this hardwood stand should be completely restored.

In addition to creating small group openings we also plan to do some light improvement cut thinnings on the other portions of this parcel (102 acres). This will involve harvesting low value, poor quality trees to make room for more wildlife and timber valued trees such as oak, hickory, pine and poplar. We will also make sure to protect soft mast producing trees (blackgum, hackberry, serviceberry, dogwood, etc.) and den trees for wildlife. No more than ten to fifteen percent of the overstory trees would be removed in this light improvement thinning. All trees recommended for removal will be marked with blue paint prior to harvest. The logging company will be instructed to remove only the marked trees and conduct the removal of trees in such a way as to not damage the residual stand. The objective of the thinning is to improve the overall quality and health

of the residual stand. The other advantage to this type of improvement cut is that the filtered light to the understory will improve the regeneration of desirable trees such as oak, hickory, and yellow poplar. These species do not grow well in full shade and require full or filter sunlight to establish successfully in the understory. Improvement cuts and the forest openings they create are beneficial to many species of wildlife because they stimulate the development of sprouts, herbs and shrubs in the understory due to the increased amount of sunlight to the forest floor. These young succulent plants provide browse for herbivores and seeds for birds and squirrels. Additionally, protective cover is improved in the understory and midstory of the forest.

We would like to do some understory winter burning in this stand on a five to six year rotation to promote more advanced regeneration of oak. This should probably be done in February, after deer and squirrel seasons are over.

Parcel K (purple):

Forest Type: Pine
Acres: ~~70~~ 64
Dominant Species: Loblolly pine (40-50%), Virginia pine (25-30%), and Shortleaf pine (25-30%)
Diameter Range: 12 to 18 inches in diameter
Age: 50 to 70 year
Growth Rate: Poor to fair
Stand Quality: Good to very good
Basal Area: 110 to 150 square feet

Recommended Treatment (Parcel K):

This is a fairly variable stand of mature pine. With your management objectives we are recommending a combination of light thinning and small evenly distributed clearcuts in 2011. We would only like to harvest ~~30% 20%~~ (19 10 acres) of this stand in the form of small clearcuts (5 to 7 acres in size) scattered throughout this stand. Every eight years we would recommend the harvesting of another ~~30% 20%~~ of this stand. Following each harvest we would recommend replanting to loblolly pine.

On the remainder of the stand we would recommend a light thinning, concentrating on removal of Virginia pine and poor quality trees. The objective of this thinning will be to increase the overall vigor and health of this stand. The goal will be to have 60 to 80 square feet of basal area or around 100 to 150 trees per acre following the thinning.

This is another stand we feel would benefit from periodic understory burning on a three to four year cycle.

Parcel L (teal):

Forest Type: Pine
Acres: 8.7
Dominant Species: Shortleaf pine (60%) and Virginia pine (40%)
Diameter Range: 10 to 14 inches
Age: 65 years
Growth Rate: Slow
Stand Quality: Poor to fair
Basal Area: 120 to 140 square feet

Recommended Treatment (Parcel L):

Even though this stand has a good stocking of Shortleaf pine, the overall quality is very poor. Most of the Shortleaf pine has lots of knots, lumps and signs of poor quality wood. We recommend a final harvest of this stand in 2011 and recommend replanting cutover back to Shortleaf pine.

Parcel M (brown):

Forest Type: Pine/Hardwood
Acres: 8
Dominant Species: Shortleaf pine and yellow poplar
Diameter Range: 12 to 18 inches
Age: 65 to 70 years
Growth Rate: Slow
Stand Quality: Fair to good
Basal Area: 100 to 110 square feet

Recommended Treatment (Parcel M):

Recommend a light marked thinning to remove poor quality trees and favor Shortleaf pine and yellow poplar in 2011.

Parcel N (light green):

Forest Type: Hardwood/Pine
Acres: 13
Dominant Species: White oak, hickory, sweetgum, and Virginia pine
Diameter Range: 10 to 16 inches
Age: 65 years
Growth Rate: Slow
Stand Quality: Poor to fair
Basal Area: 60 to 90 square feet

Recommended Treatment (Parcel N):

This is a poorly stocked, poor quality stand. Due to its proximity to the property line and a riparian forest buffer, we would recommend leaving it to grow at this time and evaluate the stand again in eight years when the next harvest cycle occurs.

Parcel O (tan):

Forest Type: Hardwood
Acres: 6
Dominant Species: White oak, red oak, hickory and yellow poplar
Diameter Range: 10 to 16 inches in diameter at breast height (DBH)
Age: 60 to 65 years
Growth Rate: Fair to good
Stand Quality: Very good
Basal Area: 90 square feet

Recommended Treatment (Parcel O):

We are recommending a light thinning of this stand in 2011 or when the thinning and harvesting of parcels K and J occur. This thinning will concentrate on removing the smallest trees, the poorest quality trees (crooked, forked, broken), diseased trees, and/or ones that are growing too closely together to improve spacing. Scattered Virginia pine and loblolly pine will also be designated for removal too.

Following thinning we would like to run a low intensity understory burn beneath this stand. The understory burn will hopefully promote more oak regeneration by controlling thinned barked species such as sweetgum, maple and beech.

Property Lines: We agree with Mr. Ray that the property boundaries at Buckhorn need to be established and painted. Defining these property lines will help to establish the boundary between you and your neighbors. It will also help to reduce trespass, timber theft, and recreational liability. Even more importantly it will help with our forest management work and keep us from encroaching onto adjacent properties during our management activities. The Wildlife Resources Commission has posted “Game Lands” signs but these signs may not follow the exact location of the true property line. OWASA needs to locate the exact location of their boundary lines. This will require the surveying company to come back out and reflag and re-blaze the property lines. Once this is done they should be clearly marked with durable paint to show the exact boundary location. This painting of boundary lines is a service True North can provide, but we will need the exact property lines to be located by a certified surveyor prior to painting. Once these lines have been established, they can be maintained by refreshing the paint every three or four years and cutting brush from them every couple of years with chainsaws and brush saws. During our exam we found some old flagging and a couple of old painted boundary line trees but, for the most part, the property lines were very difficult to locate in some areas. This should be a priority project for the first year.

BMP's: All logging and harvesting practices at Buckhorn will comply for Forestry Best Management Practice Guidelines. The Timber Sale Contract we use will spell out adherence to Forestry Best Management Practices and compliance with Forest Practice Guidelines Related to Water Quality. All the boundaries of the timber sale area will be flagged. No harvesting will occur beyond the flagged areas (day glow pink). Group Selection Openings will be marked in blue flagging. A pre-harvest plan map would also

be prepared that would show timber sale boundaries, riparian protection buffers, loading deck locations, access points and location of main haul roads.

Timing: The majority of the soil types within the harvest area are well drained. Topography is also not very excessive, ranging from 2 to 12 percent slopes. This would allow logging to occur throughout most of the year. However, there is a permitted “Archery Only” hunting season at Buckhorn and we should plan to conduct the harvests outside of the hunting seasons to avoid conflicts with hunters using the area. The best time to harvest would probably be between March and October. The timber contract will specify that we have the right to stop or delay harvesting activities should soil conditions become too wet.

Monitoring: True North Forest Management Services will be monitoring the harvest and ensuring proper compliance of the timber sale contract. The North Carolina Division of Forest Resources will be contacted prior to harvest to request enrollment in their “FPG Self Audit Program”. This program is designed to have DFR personnel do on-site inspections during the harvesting activities and provide results of their inspections.

Site Stabilization and Tract Close-out: Haul road, major skid trails and logging decks will be stabilized and closed-out upon completion of logging. This may involve re-grading roads, installing water diversion structures, seeding, strawing and installation of a gate. All will be accomplished within 30 days of cease of timbering activities.

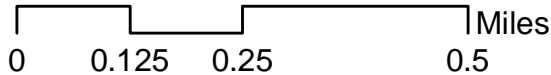
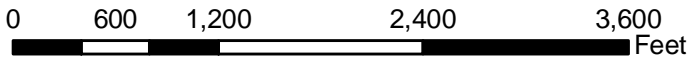
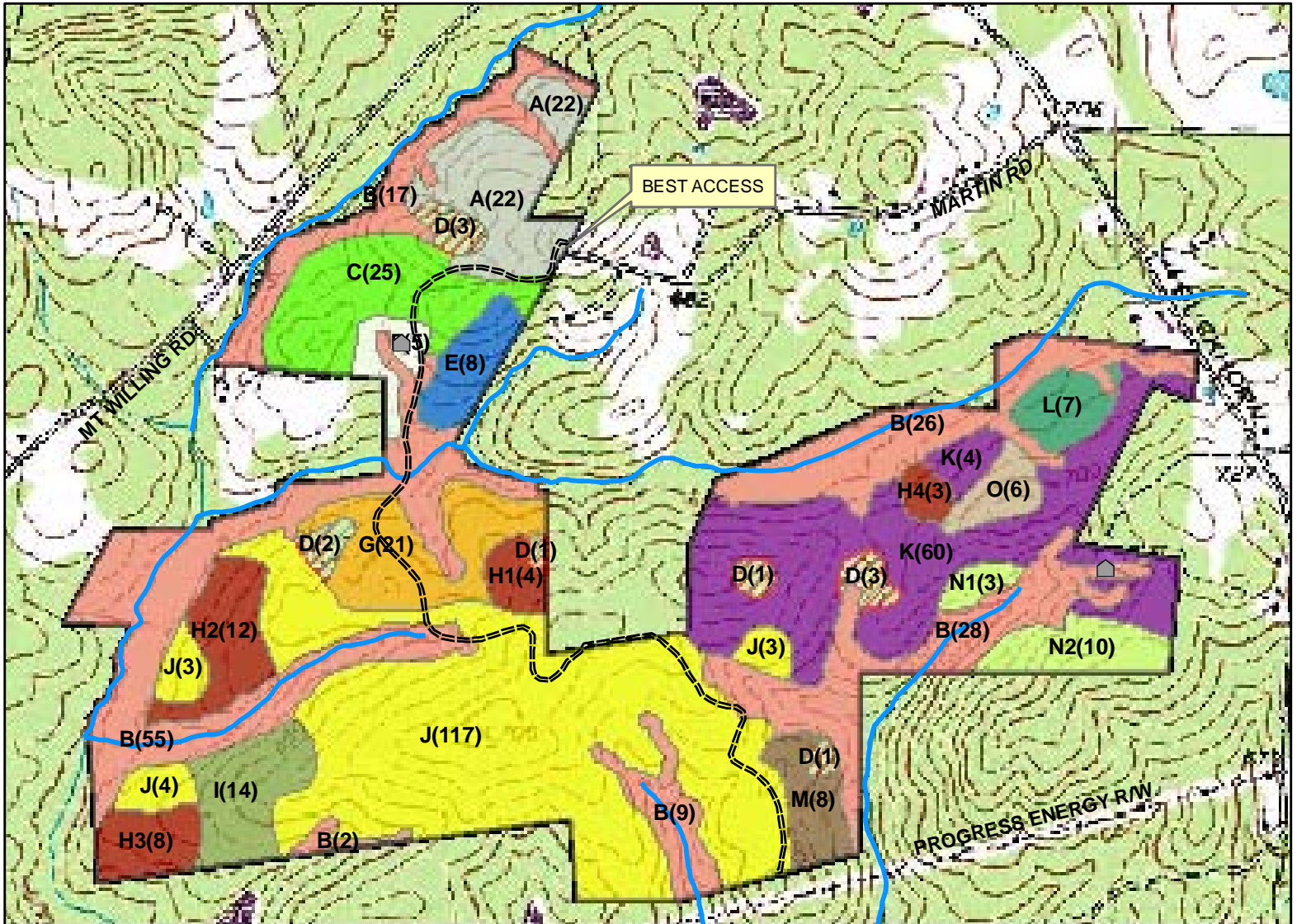
Understory Burning: The understory burning in the future is going to require the construction of firebreaks to contain planned burns. We are recommending permanent bladed firelines be constructed, instead of temporary plowed lines. The North Carolina Division of Forest Resources can construct these firelines for us at a nominal rate. True North can flag out the location of the firebreaks and oversee the construction of the lines. These should be bladed and not plowed lines so that we can maintain them for periodic burning cycles. Following each burn we recommend that the firebreaks be seeded with a wildlife friendly mix to control erosion potential and improve wildlife habitat. We recommend delaying the construction of fire lines until a burn is planned. Ten foot wide firebreaks should be sufficient. True North can also assist with coordinating schedule burns by working with the NCDFR or contracting with a certified burn contractor.

Please review this plan and let’s schedule a meeting to go over the details and set up a schedule of work.

Submitted by: _____
David Halley, RF # 1428



BUCKHORN GAME LAND - EXISTING STANDS



ACREAGES

HARDWOOD	155
PINE	152
BUFFER	137
MIXED PINE HARDWOOD	40
BLOW DOWN (STORM DAMAGE)	11
Total Acreage (approx)	495

OWNER: Orange County Water and Sewer Authority
 COUNTY: Orange
 DRAWN BY: David Halley, RF and Thomas Craven, RF
 DATE: FEB 20th, 2010
 TOPO: Efland
 LAT/LONG: N36.02 W79.22

TRUE NORTH FOREST MANAGEMENT SERVICES
 4713 Salem Ridge Rd. Holly Springs, NC 27540
 Office: 919-552-4109 Fax: 919-552-4129 Mobile: 919-815-3468

STAND CODE

A - HW	I - Mixed
B - Buffer	J - HW
C - Pine	K - Pine
D - Blowdown	L - Pine
E - Pine	M - Mixed
F - Mixed	N1, N2 - Mixed
G - Pine	O - HW
H1-4 - Pine	STREAMS
	TRAILS

Acres data and boundaries are approximate.
 This map is not intended for navigation or orienteering.
 Not all trails are depicted.
 Trail routes derived by GPS are simplified in post-processing.

DRAFT
**RESOLUTION AUTHORIZING STAFF TO IMPLEMENT ACTIVE FORESTRY
MANAGEMENT AT CANE CREEK MITIGATION TRACT**

WHEREAS, Orange Water and Sewer Authority (OWASA) desires to proactively and sustainably manage the forest resources on OWASA's 490-acre Cane Creek Mitigation Tract located north of Cane Creek Reservoir; and

WHEREAS, the North Carolina Wildlife Resources Commission (NCWRC) prepared a forest stewardship plan for the tract to protect and enhance the health and diversity of the forest resources and wildlife habitat while also protecting water quality in Cane Creek Reservoir; and

WHEREAS, OWASA's consulting forester, True North Forest Management Services, has prepared a proposed active forestry management plan to accomplish the recommendations in the NCWRC's forest stewardship plan for the Cane Creek Mitigation Tract; and

WHEREAS, OWASA held a Community Meeting on February 24, 2010 to provide information to and receive questions and comments from the public regarding the draft active forestry management plan for the Cane Creek Mitigation Tract; and

WHEREAS, OWASA has fully considered those questions and comments in development of the final implementation plan for the Cane Creek Mitigation Tract;

NOW, THEREFORE, BE IT RESOLVED:

1. The Board of Directors hereby endorses the NCWRC's forest management plan and True North's implementation plan for active forestry management of the Cane Creek Mitigation Tract.
2. The Board of Directors authorizes the Executive Director to implement the plan for active management of the forest resources on the Cane Creek Mitigation Tract.

Adopted this 25th day of March, 2010.

Randy Kabrick, P.E., Chair

ATTEST:

Braxton Foushee, Secretary

AGENDA ITEM

• APPROVAL OF OWASA'S STRATEGIC PLAN

PURPOSE

- To adopt a Strategic Plan that establishes key OWASA goals and objectives to guide the organization's work and funding priorities.

BACKGROUND

- On March 11, 2010, the OWASA Board held a work session with staff to discuss the Draft OWASA Strategic Plan. Staff made minor changes to the Draft Strategic Plan.

ACTION REQUESTED

- Discussion and approval of the Strategic Plan.

STAFF RECOMMENDATION

- Staff recommends adoption of the Strategic Plan.

March 25, 2010



ORANGE WATER AND SEWER AUTHORITY

*A public, non-profit agency providing water, sewer and reclaimed water services
to the Carrboro-Chapel Hill community.*

MEMORANDUM

TO: Board of Directors

FROM: Ed Kerwin

DATE: March 19, 2010

SUBJECT: Draft OWASA Strategic Plan

The purpose of the attached Strategic Plan is to establish the key OWASA goals and objectives to guide the organization's work and funding priorities.

On March 11, 2010, the OWASA Board held a work session with staff to discuss the Draft OWASA Strategic Plan. Staff has made minor changes to the draft document and seeks the Board's final discussion and approval.

Once the Strategic Plan is approved, staff will develop greater details about its implementation to include key progress/completion milestones and dates.

Staff believes it would be useful to provide the Board with routine updates on the Strategic Plan during regular Board meetings.

Staff recommends Board approval of the Strategic Plan and suggests this approval be authorized by motion and signature of the Board Chair and Executive Director.

Ed Kerwin
Executive Director

Attachment

OWASA STRATEGIC PLAN
MARCH 25, 2010

Introduction

OWASA's Strategic Plan establishes the key goals and objectives for the next three years or so to guide the organization's work and funding priorities. While there are many goals and objectives that must be met (and sustained) to ensure that OWASA successfully fulfills its mission (Appendix A), it is essential to establish the organization's highest priorities given that funding and staff resources are limited.

Measuring and evaluating our effectiveness are the basis for continuous improvement in all that we do. The Board and staff will routinely discuss progress and update goals and objectives as may be needed.

Mitigation strategies for external events, conditions or trends are provided in Appendix B.

Goal A: Secure Financial Stability and Sustainability

OWASA and its customers have significantly reduced the demand for drinking water which provides for the "highest and best use of our local water resource." While there are important short- and long-term benefits of conservation, the reduced demand has resulted in less water sales and revenue. We have also experienced a significant reduction in the number of new connections and have had certain non-discretionary operating expenses increase dramatically (especially chemicals and energy). Additionally, we made major investments in capital improvements during the past 10 years to sustain the structural integrity and reliability of our water and sewer facilities and infrastructures. These factors have significantly reduced OWASA's financial resources, increased our level of debt and resulted in double-digit rate increases for customers in 2008 and 2009, with increases of nearly 10% projected from 2010 to 2012.

To lessen the rate impacts on customers, OWASA has made cuts in operating and capital costs. We fully embrace our responsibility to "operate the water and sewer system at the lowest rates consistent with our obligation to provide proper and efficient services, now and in the future." It is important that the OWASA Board of Directors continues to set rates that sustain our essential services and meet the community's expectations for high quality and reliable services. We will work to keep our customers fully informed about the basis and need for rate adjustments.

Objectives

A. 1. *Complete a comprehensive functional analysis to identify opportunities to reduce costs.*

What is it?	A comprehensive assessment of OWASA's current service functions to improve efficiencies and/or reduce costs (such as biosolids management). Internal teams will be established to:
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What is it?
continued

1. Identify tasks
2. Set priorities for each task (or propose elimination of tasks because costs exceed benefits)
3. Identify opportunities to improve efficiencies and/or reduce costs of each task
4. Propose an implementation plan to include measurements of success

Why is it important?

Cost containment is critically important to ensure we have the lowest rates consistent with our obligation to provide proper and efficient services, now and in the future.

What will be accomplished?

Success in reducing costs and achieving greater efficiencies will strengthen our customers' confidence that the utility is being properly operated and maintained and that there is high value in our services.

Measure of success:

The amount of savings.

Complete by:

Complete at least three service function reviews each year for the next three years.

A. 2. *Continue implementation of improvements to the financial management and billing system and related recommendations from the consultant's report with emphasis on improved accuracy and timeliness of key financial data.*

What is it?

Improve processes and performance levels in the Finance and Customer Service Department to improve efficiencies, reduce opportunities for inaccuracies, and provide relevant, timely, reliable information to stakeholders.

Why is it important?

The organization's success and sustainability depend on our ability to operate efficiently and to have timely access to information critical to effectively manage.

What will be accomplished?

Improving processes and performance levels will allow us to reduce costs and improve the Finance and Customer Service Department's ability to provide information that will enhance all stakeholders' ability to manage the organization.

Measure of success:

Increased accuracy and timeliness of output, elimination of redundant processes, more useful management information, and cost reduction.

Complete by:

December 2011 – Target date for completion of all projects. (This initiative is made up of numerous projects involving systems in the

finance, engineering and operations departments. Several will be accomplished sooner than December of 2011 and we will determine target completion dates on a per project basis.)

A. 3. *Adopt rate adjustments to ensure financial stability.*

What is it?	In combination with efforts to improve efficiencies and reduce costs, we are required to set rates and fees according to the “cost of service” principle – all within the context of developing and implementing a strategic financial plan.
Why is it important?	Adjusting rates and fees is essential to meeting our responsibility to operate the water, sewer and reclaimed water systems at the lowest rates possible and our obligation to provide sustainable, essential services now and in the future.
What will be accomplished?	Revenue will be generated that is sufficient to support operations, maintenance and capital expenditures while maintaining the financial stability to obtain financing, when necessary, at the least cost.
Measure of success:	Meet or exceed the reserves, debt service coverage ratio and all other objectives established in the Board’s Financial Management Policy.
Complete by:	Annually

A. 4. *Develop and implement a plan to increase our customers’ understanding of the need for rate adjustments which reflect the “true cost” of OWASA’s water, sewer and reclaimed water services.*

What is it?	The true cost of our services includes: (1) infrastructure (capital assets) renewal and replacement on a timely, optimum basis; (2) maintaining our facilities to keep/enhance their value, reliability and effectiveness; (3) building adequate reserves for infrastructure projects and financial sustainability; (4) investments to increase the efficiency and sustainability of our services; and (5) the operating costs of providing essential drinking water, sewer and reclaimed water services. We will develop and implement a plan to communicate the above concepts and increase understanding of our basic approach to setting rates.
Why is it important?	OWASA has a fundamental duty to inform its customers about how it sets rates and how OWASA uses the public resources provided by our customers.
What will be accomplished?	Increased understanding of our process for setting rates will increase the level of acceptance and support for the level of resources that

OWASA needs in order to serve the community with high quality, reliable services in a sustainable manner.

Measure of success: Customers' understanding of the true cost and value of OWASA's services as demonstrated by feedback received from quantitative research (surveys, etc.).

Complete by: Summer 2010 – Plan will be modified as appropriate each year.

Goal B: Resource Management and Infrastructure Sustainability

To provide current and future customers with high quality water, wastewater and reclaimed water services, we must have adequate and reliable resources, facilities, and infrastructure. OWASA must plan, construct, operate and maintain its water, sewer and reclaimed water systems consistent with our values of environmental, social and economic sustainability and in a way that will not compromise our ability to meet the needs of future generations.

Objectives

B. 1. Develop a Comprehensive Asset Management Plan.

What is it? Asset Management can be defined as managing infrastructure with the objective of minimizing the total cost of owning and operating the assets while providing the desired level of service. It is a process that guides the acquisition, use, and disposal of infrastructure assets and is necessary to optimize service and minimize cost over the life of the asset. A Comprehensive Asset Management Plan will provide an overview of the infrastructure systems, develop standard service levels and performance, and identify a renewal strategy along with projected financial impacts.

Why is it important? Water and wastewater utilities are facing greater challenges in maintaining their assets while providing a high level of service at a reasonable cost. Asset management helps ensure that utilities maintain and renew their assets in a cost-effective manner.

What will be accomplished? A Comprehensive Asset Management Plan will incorporate key elements related to: level of service, performance goals, useful life, condition assessment, maintenance history, capacity assessment, maintenance objectives, failure analysis, and financial planning. Initial infrastructure components to be considered in the plan include: the water distribution and wastewater collection systems, water treatment facilities, wastewater treatment facilities, administrative facilities, and vehicles/equipment used to maintain the assets.

Measure of success: Availability of data on all above and below ground assets and mobile equipment, including description, location, acquisition date and cost (if available), condition assessment, useful life, replacement cost, maintenance history, and consequence/risk of failure. This data will be used to develop a comprehensive renewal/replacement guide with funding requirements.

Complete by: December 2012

B. 2. *Complete ongoing engineering studies (Wastewater Treatment Plant Capacity Study; Water Distribution Model and Wastewater Collection System Evaluation) to improve our ability to identify and prioritize capital improvement projects.*

What is it? The Mason Farm Wastewater Treatment Plant (WWTP) Capacity Study will assess and optimize the nutrient removal and hydraulic capacity of the WWTP to identify approximate costs and timing for required future capital improvements at the plant. The Water Distribution Model and Wastewater Collection System Evaluation will identify and prioritize requirements for future studies and projects necessary to rehabilitate, replace or increase the capacity of OWASA's critical water distribution and wastewater collection systems for a 20-year planning period.

Why is it important? Provides staff with the essential information needed to identify and prioritize projects in OWASA's Capital Improvement Program.

What will be accomplished? Assist staff in identifying project priorities and approximate timing for those projects that must be accomplished in order to ensure OWASA's systems reliably meet the needs of our customers, today and in the future.

Measure of success: Beginning in FY 2011, have an improved ability to program estimated costs and timing for future capital work at the WWTP. Beginning in FY 2012, have an improved ability to identify and prioritize CIP projects for rehabilitation and replacement of underground water distribution and wastewater collection system infrastructure.

Complete by: 1) WWTP Capacity Study – Spring 2010
2) Wastewater Collection System Evaluation – Winter 2010
3) Water Distribution Model – Spring 2011

B. 3. *Secure Future Access to OWASA's Jordan Lake Water Supply Allocation by working with the Jordan Lake Partnership and other stakeholders.*

What is it?	The Jordan Lake Partnership is comprised of a group of Triangle area utilities working collaboratively to enhance the sustainability and security of the region's water supply resources through conservation and efficiency, interconnection, and coordinated planning and development of the Jordan Lake water supply.
Why is it important?	Continued participation in the Partnership will provide OWASA with important opportunities to develop the arrangements necessary to ensure OWASA's ability to gain secure and cost-effective access to its Jordan Lake water supply storage allocation.
What will be accomplished?	Although OWASA will continue to maximize the best use of its local water supply resources, access to Jordan Lake offers the most cost-effective way to temporarily supplement our local supply during events such as severe drought, equipment failure, natural or manmade disaster, or other unforeseen circumstances.
Measure of success:	Obtain secure and cost-effective access to OWASA's Jordan Lake allocation.
Complete by:	December 2014 (could be delayed if allocation process is complicated by inter-basin transfer issues)

Goal C: Knowledge Management and Workforce Sustainability

OWASA must maintain a high performing, flexible and diverse workforce; and obtain, manage and use information to optimize our performance.

Objectives

C. 1. *Continue to evaluate and implement needed changes in compensation and development programs to attract and retain a diverse and high performing team of employees.*

What is it?	On-going review of our pay and benefits packages to ensure they are competitive. We will periodically assess our compensation plan to ensure that we are providing the right incentives for our employees to act in accord with organizational goals. We will continue to compare our programs to those of other agencies against whom we compete for employees. We will also continue to examine our training and development programs to make certain they provide the right opportunities and incentives for employees to continue their skill and knowledge development.
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Why is it important?	Competitive pay, a quality benefits package and opportunities for career growth and development are the key components for maintaining a high performing work team. A quality and diverse work team is the most important element of a high functioning organization.
What will be accomplished?	Regularly updated information on the competitiveness of our compensation package to use in making make periodic changes or adjustments to our plans as necessary.
Measure of success:	1) Attrition Rate of less than 8% 2) Diversity Goals – 25%
Complete by:	Annually

C. 2. *Develop a Succession Plan for Key Positions.*

What is it?	To prepare a succession plan for those positions at OWASA which are key to the organization’s success in that they provide specialized knowledge, skill and leadership in various work areas. We will concentrate most heavily on those jobs that are both essential to the organization’s success and difficult to fill when vacated.
Why is it important?	Having this process in place is important to the success of the organization because the positions identified in the plan are considered essential to ensuring that OWASA is fully capable of addressing future challenges. "High potential" candidates must be carefully identified and then provided the training and development that gives them skills and competencies needed for tomorrow's water utility business.
What will be accomplished?	Identification of key positions which may prove difficult to fill, the creation of a plan for both identifying “high potential” candidates within the organization and the appropriate on-the-job-and other training and development opportunities to be provided for the candidates. We will also note positions within the organization which are “natural training grounds” to move into key roles in the company.
Measure of success:	1) Percentage of positions filled by in-house promotions – 40% 2) Sufficient number of personnel identified and participating in “succession program.”
Complete by:	July 2011

C. 3. *Complete development and field validation of OWASA infrastructure in the Geographic Information System (GIS).*

What is it?	OWASA’s GIS is a computer-based system that contains extensive data on the location, size, material type, age and other important information about our underground infrastructure. When overlaid with aerial photography, topographic, and other data, GIS provides ready access to essential information about our water distribution, wastewater collection and reclaimed water systems.
Why is it important?	In addition to day-to-day operational efficiency, GIS is an essential tool for knowledge retention and management. For significant portions of the OWASA service area – especially in the older areas of Carrboro and Chapel Hill – important water and sewer information has been informally passed down through the years from one employee to another either in the form of handwritten notes and sketches or verbally. To capture this essential knowledge before OWASA’s most senior employees retire, staff has undertaken an aggressive program to ensure that all available water and sewer information, including the extensive information that exists primarily in the memories of those most experienced staff members, is verified and efficiently consolidated in OWASA’s GIS.
What will be accomplished?	Because GIS provides the primary asset management database for OWASA’s underground infrastructure, upgrading the accuracy of information about pipe location, material, age, size, etc. will improve the functionality and effectiveness of the predictive computer modeling that OWASA uses to prioritize rehabilitation and replacement work on critical underground water and sewer infrastructure. Additionally, as a crucial knowledge management/retention tool it will eventually enable newer and less experienced employees – as well as OWASA’s most seasoned and knowledgeable field crews – to locate key components of OWASA’s underground infrastructure via laptop computers.
Measure of success:	<ol style="list-style-type: none">1) Attributes (size, material type, age, etc.) of underground infrastructure are considered fully adequate to meet asset management planning objectives for all underground infrastructures.2) GIS (accessed via lap top) is the “tool of choice” for all OWASA employees when determining existing conditions (location, etc.) for OWASA’s underground infrastructure.
Complete by:	Spring 2011 – Field validation of water features in the “critical” portion of the service area (water features in the remainder of the service area by early 2016).

Goal D: Enhance Customer Satisfaction

OWASA is dedicated to excellence in serving customers in all of our services. We must understand our customers' expectations and perceptions and make improvements where needed. We will provide excellent service so that if our customers could choose their water utility, they would always select OWASA.

Objectives

D. 1. *Implement new and improved online billing and account management features.*

What is it?	Implement the Cogsdale Customer Web module to provide online bill access, email bill notices and improved online payment features for customers.
Why is it important?	Online bill access and payment features for customers are expected to reduce cost through reduced mailings, increase customer satisfaction by providing greater access to account information and reduce the level of effort in the Customer Service Department by enabling integration between online payments and Cogsdale Customer Service Management.
What will be accomplished?	The Customer Web will improve customer service through self-service, reduced costs and improved accuracy.
Measure of success:	1) Cogsdale Customer Web up and running error free 2) Redundant cash entry processes eliminated 3) 10% growth per year in number of customers using online billing (30% by end of year three)
Complete by:	1) April 2010 2) April 2010 3) 10% of customer base by June 2011; 20% of customer base by June 2012; 30% of customer base by June 2013

D. 2. *Develop a plan to measure customer satisfaction, now and into the future.*

What is it?	Measuring customer satisfaction involves formal and informal research and feedback processes to learn more about how our customers perceive and evaluate OWASA, including services, business operations, and interactions/relationships with individual customers/stakeholders and community organizations. These processes will include seeking feedback from individual customers, holding "focus group" interviews, and doing periodic formal surveys designed to obtain statistically valid data.
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Why is it important?	OWASA's definition of success includes not only providing high quality water, sewer and reclaimed water services efficiently and sustainably as measured by operating parameters, but also the human side: we want our customers to understand and to have a high level of satisfaction with both our services and our interactions with customers including those related to bills/accounts, services, projects, plans and policies; and proposed changes in them.
What will be accomplished?	A high level of customer satisfaction and understanding and increased acceptance and support for the level of resources we need to serve the community effectively and sustainably.
Measure of success:	Levels of satisfaction as indicated in survey instruments with quantitative responses; supplemented by specific/qualitative perceptions communicated to OWASA in other feedback processes.
Complete by:	Fall 2010

Approved by the Board of Directors:

Randy Kabrick, P.E., Chair

Date

Ed Kerwin, Executive Director

Date

MISSION AND VALUES STATEMENT

Our Mission:

OWASA will provide our customers with high quality water and wastewater services through responsible, sustainable, and creative stewardship of the resources and assets we manage. We will do this with a productive, empowered, talented, and diverse work force, which strives for excellence.

Our Values:

- **Quality Drinking Water**
We will provide the highest quality drinking water for our customers through proactive and sustainable watershed management, and the effective and reliable operations and maintenance of the water supply, treatment, and distribution system.
- **Environmental Responsibility**
We will protect the environment through the effective and reliable operation and maintenance of the wastewater collection, treatment, and recycling systems. We will manage our resources and assets in an environmentally responsible manner, maintaining or exceeding any regulatory requirements or mandates.
- **Excellence in Customer Service**
We are dedicated to excellence in serving customers in all aspects of our business services. We will be leaders in keeping our customers informed and will provide them meaningful opportunities to participate in decisions that are important to the community.
- **Employees**
We value our employees as our most important resource and we will provide them competitive compensation and benefits, and maintain a safe and rewarding work environment. We will promote diversity and equal opportunity for development and advancement for all employees.
- **Efficiency and Value**
We will perform all services in a financially sound and responsible manner with sufficient revenues to properly operate and fully maintain the water and wastewater system. As OWASA relies solely on user fees, we will continue to be guided by cost-of-service principles with regards to our rates, fees, and charges, and operate the water and sewer system at the lowest rates consistent with our obligation to provide proper and efficient services, now and in the future. We remain committed to continuous improvement in all of our services and will provide high value to our customers.
- **Sustainability**
We will proactively plan, construct, operate, maintain, and finance the water and wastewater system in a manner consistent with the principles of environmental, social and economic sustainability. We will work hard to meet the needs of our current and future customers, community, and environment without compromising the ability of future generations to meet

their needs. We will strive to make the highest and best use of our local water resources and we will adopt practices which encourage conservation of water, energy, and other natural resources.

- **Local Government Compatibility**

We will manage our responsibilities in a manner consistent and compatible with the adopted growth management policies and land use plans of the Town of Carrboro, the Town of Chapel Hill, and Orange County. We will maintain open and positive communications with our local governments. We will also maintain open and positive communications with neighboring water utilities and cooperate in regional initiatives where appropriate and consistent with OWASA's commitment to its member governments.

- **Innovation and Creativity**

We will seek innovation and creativity in accomplishing our mission and enhancing our services. We will invest in ongoing research and development for new and improved ways to accomplish our mission.

EXTERNAL FACTORS AND MITIGATION STRATEGIES

Strategic planning includes identifying and preparing for events, conditions and trends that are outside of our control, but that may significantly affect our operations, plans, costs and resources.

Mitigation strategies may include contingency/emergency planning and risk management with an emphasis on developing and maintaining capabilities to respond to change.

OWASA has identified the following categories of change that may significantly affect us and mitigation strategies for each.

Categories of Change	Mitigation Strategies
<p>ECONOMIC</p> <ul style="list-style-type: none"> ● Reduced water sales/new connections ● Costs of energy/supplies/construction ● Borrowing costs 	<ul style="list-style-type: none"> ✓ Reserve/contingency funds ✓ Cost reductions where appropriate ✓ Cash funding of capital projects
<p>CUSTOMER/STAKEHOLDER EXPECTATIONS AND NEEDS</p> <ul style="list-style-type: none"> ● Expectations for service quality and reliability ● Efficiency and cost reduction 	<ul style="list-style-type: none"> ✓ Survey customers regarding their interests and perceptions about OWASA services to make improvements ✓ Maintain open communications with key stakeholders such as local governments and the University
<p>WEATHER/HEALTH EVENTS</p> <ul style="list-style-type: none"> ● Droughts ● Hurricanes/disaster events ● Disease outbreaks ● Fiscal impacts 	<ul style="list-style-type: none"> ✓ Redundancy in critical resources (availability of personnel, back-up power equipment, etc.) ✓ Maintain adequate supplies and contingency plans; training exercises ✓ Fiscal reserves
<p>WORKFORCE CHANGES</p> <ul style="list-style-type: none"> ● Changes in the demographic profile of employees due to retirement, population change in labor market, etc. <ul style="list-style-type: none"> ○ Potential loss of institutional memory ○ Changes in employees' expectations about the workplace, patterns of career and employment 	<ul style="list-style-type: none"> ✓ Knowledge transfer, mentoring, training ✓ Training to understand generational differences ✓ Identify language resources and/or training needs ✓ Training to understand generation and cultural differences

Categories of Change	Mitigation Strategies
<ul style="list-style-type: none"> ○ Increase in number of employees for whom English is a second language 	
<p>REGULATORY POLICIES</p> <ul style="list-style-type: none"> ● State and Federal regulatory changes ● Jordan Lake rules; other ● Local requirements, e.g. WWTP odor elimination ● Town/County land use policies and plans 	<ul style="list-style-type: none"> ✓ Monitor/participate in regulatory processes; financial planning for costs of potential changes ✓ Develop/propose phasing plans ✓ Continue to participate in long-term inter-local agreements; monitor and when appropriate comment on proposed changes that may affect OWASA
<p>TECHNOLOGY/SCIENTIFIC ADVANCES</p> <ul style="list-style-type: none"> ● Emerging contaminants ● Cost or capabilities, e.g. in treatment technology, detection levels 	<ul style="list-style-type: none"> ✓ Monitor research results, keep customers informed about how they may be affected, options such as use of filters in homes, businesses ✓ Evaluate options that are approaching technical and economic feasibility
<p>BUSINESS PRACTICES</p> <ul style="list-style-type: none"> ● Changes in customary and best practices in the water industry and related sectors and in the local community 	<ul style="list-style-type: none"> ✓ Monitor industry trends, survey customers