



North Carolina Department of Environment and Natural Resources  
Division of Water Resources

Beverly Eaves Perdue  
Governor

Thomas A. Reeder  
Director

Dee Freeman  
Secretary

## **ENO RIVER ANNUAL WATER USERS MEETING**

August 30, 2012 1:00 P.M.  
Hillsborough, NC

### **Meeting Minutes**

#### **Attendees:**

Linwood Peele – Division of Water Resources (DWR);  
Brian Strong – Division of Parks and Recreation (DPR);  
Keith Neelson – Eno River State Park;  
Kevin Lindley & Tom Davis – Orange County;  
Kenny Keel & Julie Laws – Town of Hillsborough;  
Faye Metcalf, Christopher Dale Hamby, & Ben Lloyd – Orange-Alamance;  
Robin Jacobs – Eno River Association;  
John Tolar – Lake Orange, Inc.;  
Don Hierman, Buzz Koenig & Ken Terlep – Friends of Lake Orange.

- Linwood Peele convened the meeting;
  - Welcomed all participants and attendees and thanked the staff of the Town of Hillsborough for hosting the annual meeting.
- Introductions.

#### **Historical Operations:**

Kevin Lindley provided a brief historical summary and overview of the Eno River Voluntary Capacity Use Agreement;

- Agreement formed through compromise between all water systems and water users for usage in order to keep the Eno River from running dry;
- USGS maintains hourly levels online;
  - Releases from Lake Orange Reservoir take about two days to register on the USGS gauge (an 8-mile trek);
  - Wayne receives an email when USGS gage reading is 10 cfs or lower.
- Lake Orange Reservoir sluice gate opens up and down and can open so water goes down pipe under dam and into channel. Adjustments to the gate have to be done by an Orange County computer and only four employees, including Kevin, are authorized to do this.
- Currently, Lake Orange Reservoir is 34” below full and Kevin is releasing 2.8 cfs.

## **Annual Operations:**

Linwood Peele provided the status of water usage in the basin;

- Generally, water usage is declining due to household appliances, toilets, etc. being more water efficient, which leaves it hard to ask customers to cut back on water when they're already doing it.
- Falls Lake is experiencing a loss of in-flow greater than one billion gallons per year, and this occurrence is increasing over time.
- Flows in the Neuse River basin have decreased over the last 20 years according to USGS.
- In regards to basin modeling, the project has experienced personnel setbacks and the Division is currently hiring a supervisor to continue the project.

## **Water Use & Stream Flow Report:**

- Linwood Peele provided and discussed several graphs and tables;
  - **Graph 1:** Eno River Average Weekly Withdrawals (When Operating Average); August 2011 – July 2012 with level of restrictions.
  - **Graph 2:** Eno River Average Weekly Withdrawals (7-day Average); August 2011 – July 2012 with level of restrictions.
  - **Graphs 3 & 4:** Eno River @ Hillsborough Gage #02085000; Flow vs. Date (flow less than 10 cfs for August 2011 – July 2012).
  - **Table 1:** Summary for 2010 Stages of Restriction. (August 2011 – July 2012); Provided number of weeks at each level of restrictions. Provided average and total use for the Eno River Users.



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**ENO RIVER ANNUAL SUMMARY REPORT**

**August 2011 – July 2012**

August 30, 2012

| Month          | Dates of Restrictions: |         |         |         |         |
|----------------|------------------------|---------|---------|---------|---------|
|                | No Restrictions        | Stage 1 | Stage 2 | Stage 3 | Stage 4 |
| August 2011    |                        | 01 – 12 | 13 – 31 |         |         |
| September 2011 |                        |         | 01 – 14 | 15 – 30 |         |
| October 2011   |                        |         |         | 01 – 13 | 14 – 31 |
| November 2011  |                        |         | 29 – 30 | 04 – 28 | 01 – 03 |
| December 2011  | 28 – 31                |         | 01 – 27 |         |         |
| January 2012   | 01 – 31                |         |         |         |         |
| February 2012  | 01 – 31                |         |         |         |         |
| March 2012     | 01 – 31                |         |         |         |         |
| April 2012     | 01 – 31                |         |         |         |         |
| May 2012       | 01 – 31                |         |         |         |         |
| June 2012      | 01 – 10                | 11 – 30 |         |         |         |
| July 2012      |                        | 01 – 31 |         |         |         |

**August - December 2011**

Weeks of Restrictions

**STAGE 1:** 1 week, 5 days

**STAGE 2:** 8 weeks, 6 days

**STAGE 3:** 7 weeks, 5 days

**STAGE 4:** 3 weeks, 0 days

**January - July 2012**

Weeks of Restrictions

**STAGE 1:** 7 weeks, 2 days

**Hillsborough:**

Total use: 1.057 mgd  
Avg. Eno use: 1.057 mgd  
(when operating: 1.057 mgd)

Total use: 1.033 mgd  
Avg. Eno use: 1.033 mgd  
(when operating: 1.033 mgd)

**Orange-Alamance:**

Total use: 0.649 mgd  
Avg. Eno use: 0.145 mgd  
(when operating: 0.220 mgd)

Total use: 0.600 mgd  
Avg. Eno use: 0.096 mgd  
(when operating: 0.204 mgd)

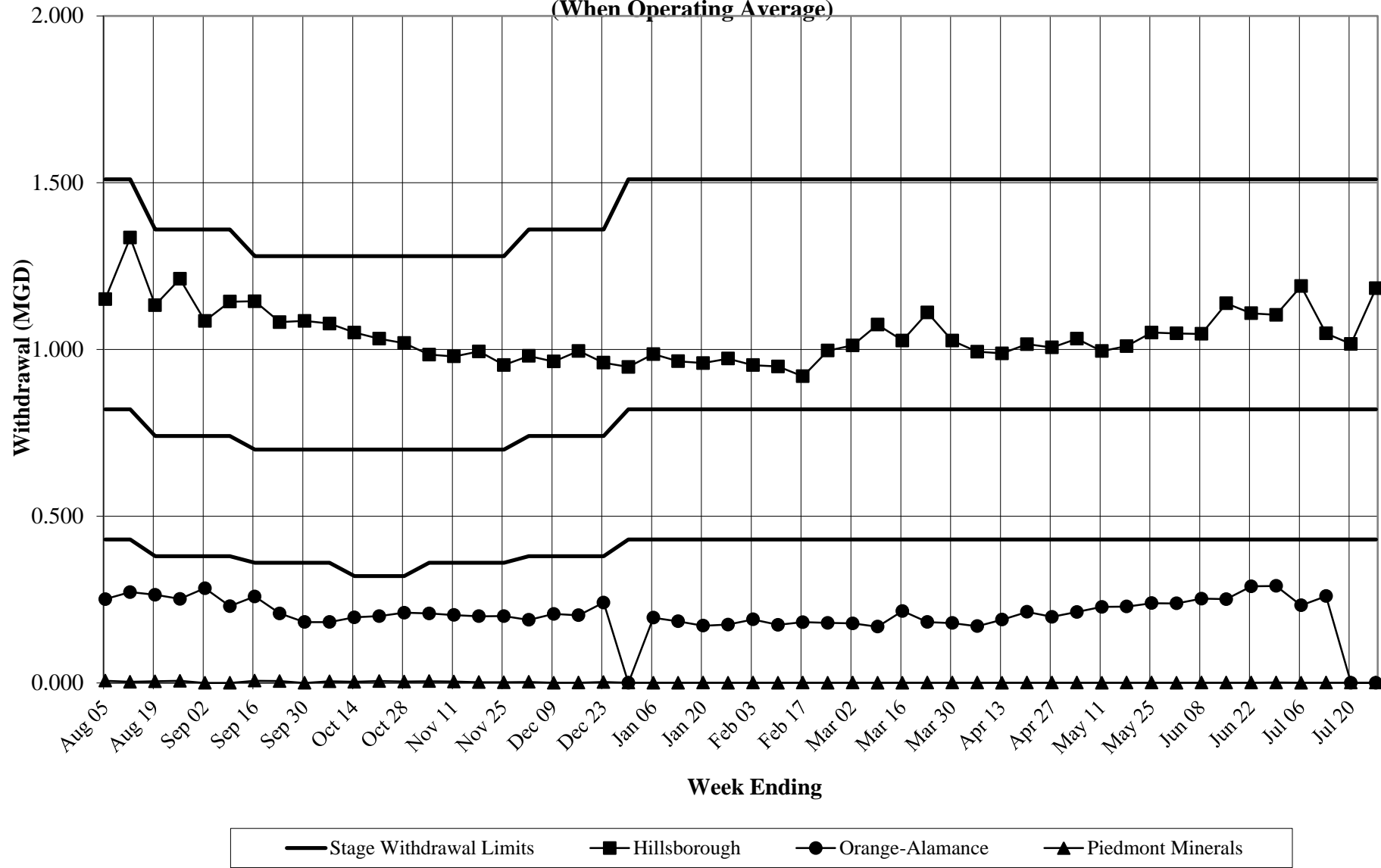
**Piedmont Minerals:**

Total use: 0.0005 mgd  
Avg. Eno use: 0.0005 mgd  
(when operating: 0.0035 mgd)

Total use: 0.0001 mgd  
Avg. Eno use: 0.0001 mgd  
(when operating: 0.0004 mgd)

# ENO RIVER AVERAGE WEEKLY WITHDRAWALS

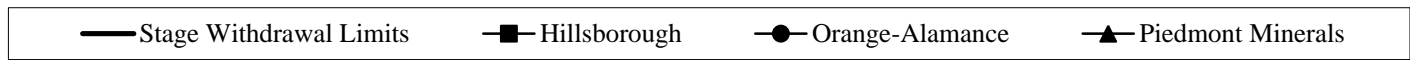
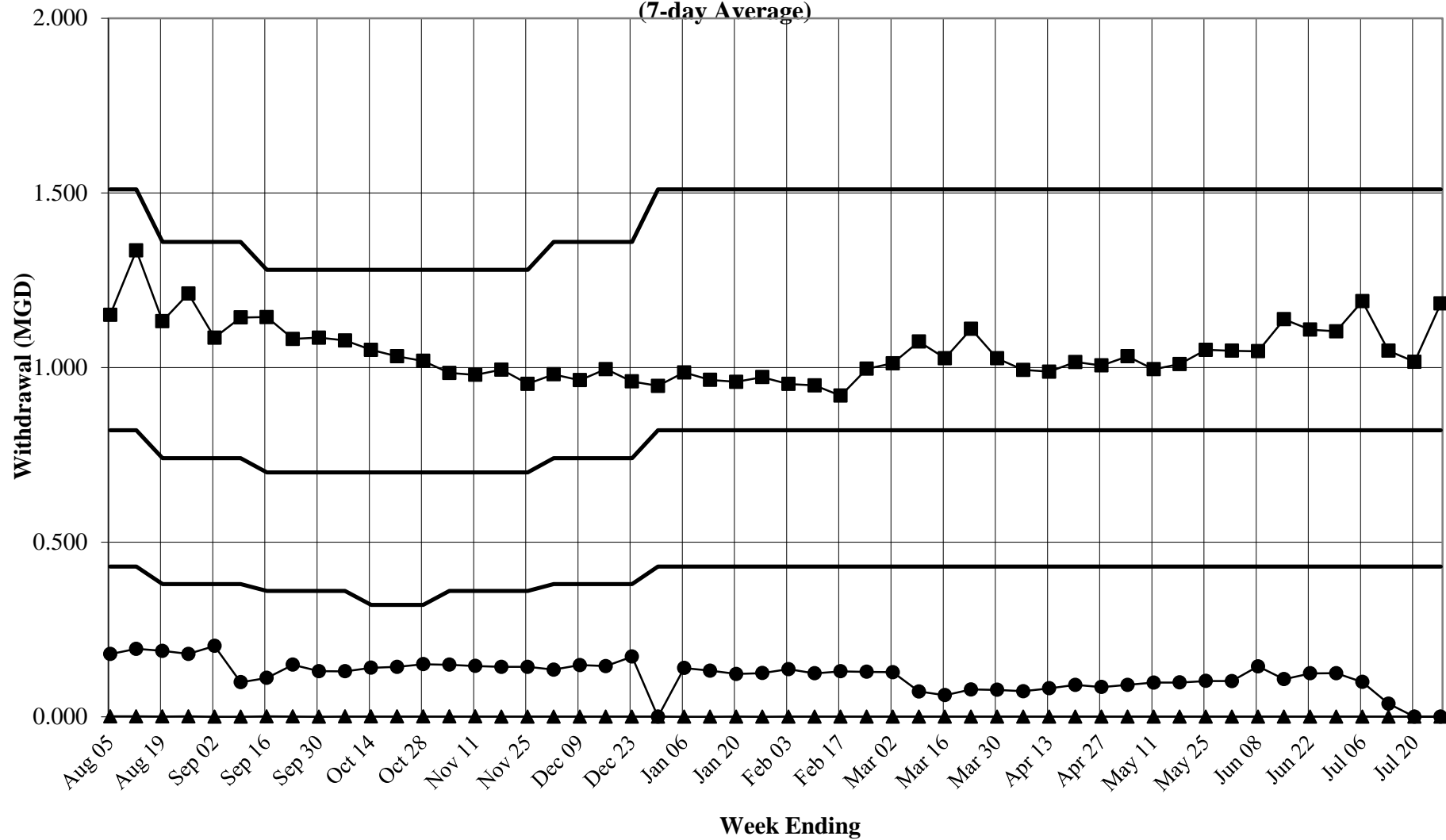
August 2011 - July 2012  
(When Operating Average)



# ENO RIVER AVERAGE WEEKLY WITHDRAWALS

August 2011 - July 2012

(7-day Average)

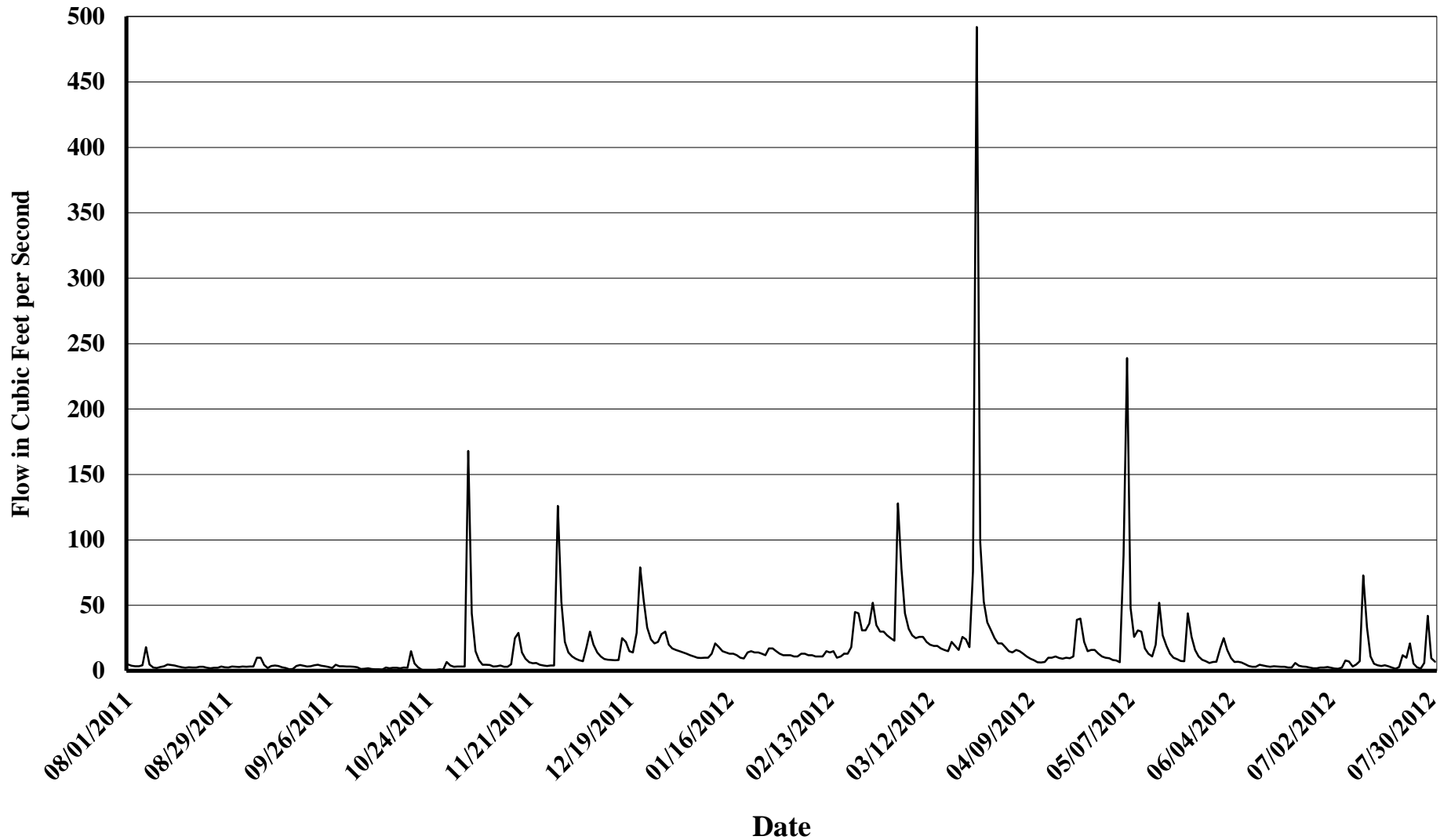


# ENO RIVER @ HILLSBOROUGH, #02085000

August 1, 2011 - July 31, 2012

08/01/11-09/30/11: USGS data approved for publication.

10/01/11-07/31/12: USGS provisional data subject to revision.

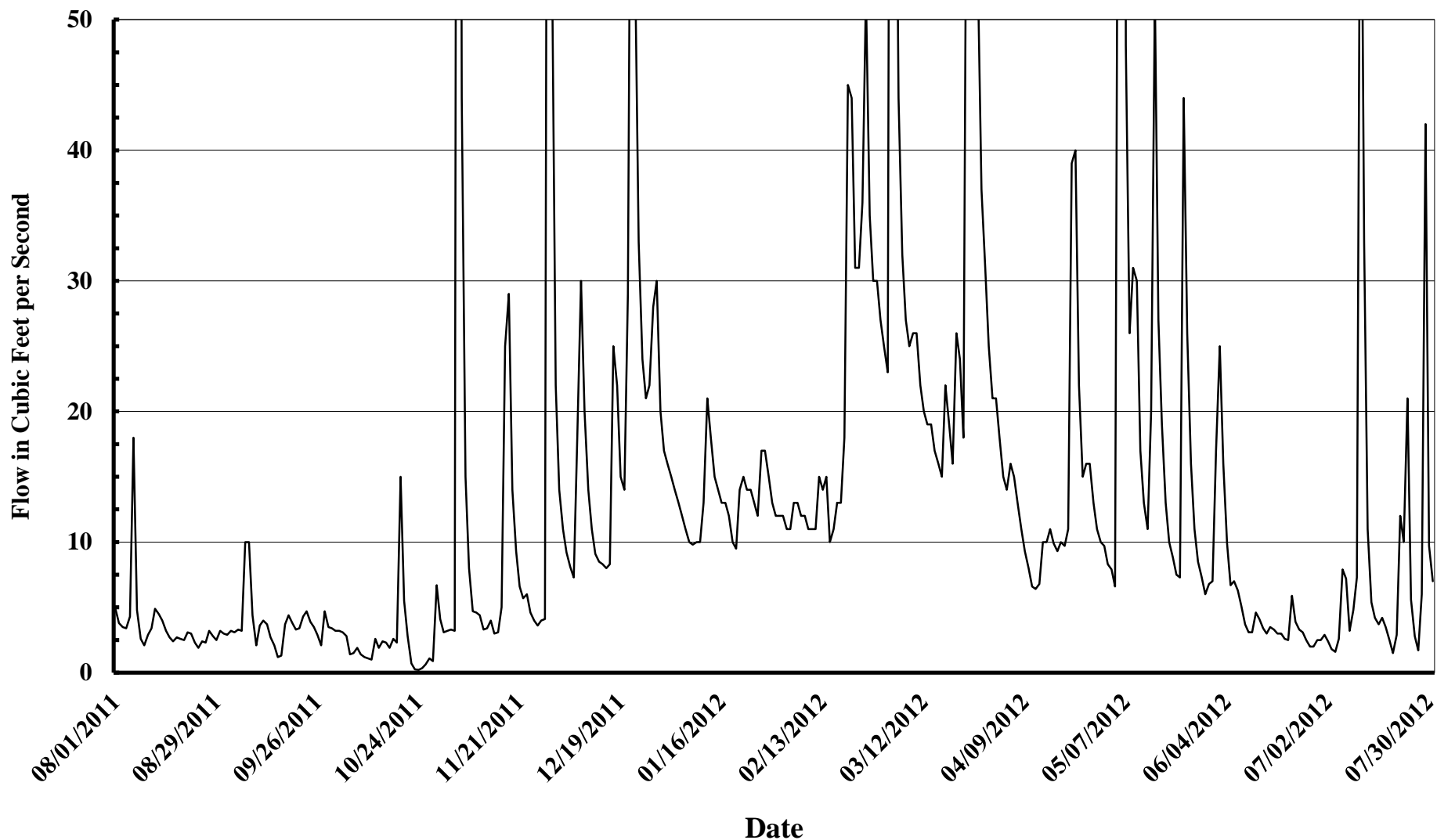


# ENO RIVER @ HILLSBOROUGH, #02085000

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## Status of Water Users:

### Hillsborough

- Kenny Keel provided the status of Hillsborough's WFER;
  - WFER level hasn't changed much since May, system using slightly more than 1.1 MGD;
  - WFER down nearly 1.5', which is approximately a whole year of supply remaining (357 days);
  - Hillsborough went 16-17 weeks with usage below 1.0 MGD, which has helped with WFER levels.
  - More users are gradually being added to the system, but average usage has been going down, which equalizes usage.
  - WFER minimum flow is 1.0 cfs, although March-April it was as high as 4.0 cfs.
  - Phase 2 of WFER will add another 10 feet to the depth, which will more than double supply;
    - Permitted through 2018, so Hillsborough planning to begin expansion soon.
  - The addition of UNC Hospitals as a customer will create growth, but Hillsborough forecasts sufficient supply through 2060 because of WFER, Phase 2. Also, Hillsborough may receive water from Jordan Lake at some point in the future.
  - Provided an update on the progress of Lake Ben Johnston's dredging.

### Orange-Alamance

- Ben Lloyd recognized Faye Metcalf for her 38+ years of service at Orange-Alamance.
- Ben Lloyd complimented Hillsborough for supplementing Orange-Alamance and for building WFER to supplement Orange County's water supply.
- Faye Metcalf provided the status of Orange-Alamance;
  - No significant changes in water withdrawals within the last year,
  - Eno River withdrawals are between 0.200 mgd - 0.300 MGD,
  - Orange-Alamance water treatment plant now only operates three days per week,
  - Increased use of wells located at water treatment plant, produces approximately 0.100 MGD,
  - Orange-Alamance maintains a 20-year purchase water contract with the Town of Haw River,
    - Contract purchase minimum of 0.300 MGD and a maximum of 0.800 MGD.
  - Orange-Alamance has two wells located at our Kimrey water tank on 119S. These wells are used periodically when the need arises.
  - A new well has been constructed on Lynch Store Road off 119N.
    - Well is not yet in operation, Yield = 0.177 gpm.
  - Orange-Alamance does not anticipate any major changes in water usage

### Piedmont Minerals

- There was no representative for Piedmont Minerals present to provide an update.

### Eno River State Park

- Keith Neelson stated that Park visitors would love to see increased water flow through the Park;
  - There will be a meeting regarding hydrilla in the river
    - Hydrilla due to shallowness and slow flows of Eno River.
    - Hydrilla was first noted in 2008.
    - Can use carp in a lake but not sure how effective this solution will be in the river.
    - Hand-pulling does NOT work!



**Follow-up Items:**

- Robin Jacobs inquired when are the proposed dates of completion for the Neuse-Cape Fear River Basin Model and the Ecological Flow Study.
  - Linwood Peele agreed to look into the status and update her after the meeting.
- Buzz Koening relayed the concerns of the Friends of Lake Orange;
  - Concerned the depth of Lake Orange Reservoir; being full for only a small period during the year.
  - Concerned over the lack of inflow into Lake Orange Reservoir.
  - Feel it's not fair to penalize residents,
    - Cannot use the reservoir for recreational purposes due to its muddy lagoons;
    - Also stated the smell from dead fish was unpleasant, especially at night.
    - Reservoir conditions devalue the value of residences adjacent to the County's property.
- John Tolar of Lake Orange, Inc. also emphasized it is unfair that no recreation is allowed on the West Fork Eno Reservoir though it is full (~1.5 feet below full by Mr. Keel's records), but that Lake Orange Reservoir is open to recreation, while it dries up.
- Kenny Keel and Kevin Lindley planned to meet to discuss the issues raised during the meeting concerning Lake Orange Reservoir.
  
- Linwood Peele adjourned the meeting.