**State of Wisconsin**
**DEPARTMENT OF NATURAL RESOURCES**
**101 S. Webster Street**
**Box 7921**
**Madison WI 53707-7921**

**Scott Walker, Governor**
**Cathy Stepp, Secretary**
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711

Subject: Upper (Illinois) Fox Watershed, Wisconsin, Flood Risk Review Meeting

Date: May 18, 2016 10:00 AM -11:30 AM

Location: SEWRPC offices, W239 N1812 Rockwood Drive, Waukesha, WI

Attendees: See attached sign-in sheets

Mike Hahn from the Southeast Wisconsin Regional Planning Commission opened the meeting as it was held at the SEWRPC offices. He thanked everyone for attending the Flood Risk Review and hoped they would stay for the Resiliency meeting. He then introduced Chris Olds as the lead engineer on the project.

Chris Olds thanked everyone for attending the Flood Risk Review meeting. He introduced attending Wisconsin DNR staff including G. Fritz Statz, Meg Galloway, Betsy Finlay, Emily Szajna, Tanya Lourigan, and Michelle Staff. Also introduced were staff from Wisconsin Emergency Management including Roxanne Gray, Katie Sommers, and Chad Atkinson.

Olds then went on to explain the goals of the meeting. These included community feedback, overview of hydrologic and hydraulic analysis, present draft results, answer questions, and collect comments and feedback.

An overview of Risk MAP and the status of the current mapping were given. This included information on the current effective maps and the discovery that has taken place for the present mapping effort. Revised streams were shown in map and list form.

Olds then discussed specifics of the detailed and approximate study hydrology and hydraulics methods and data.

To conclude the meeting Olds then explained how we were going to move forward. He discussed reviewing the workmaps, writing comments, marking maps, topic list of who to contact, and how to best communicate.

After getting feedback from the meeting it was decided to put get the communities the data used to create the workmaps so they could bring the data into their own GIS rather than the static map. The data was put on the Departments ftp site and the location included in the follow-up email to communities.

# Risk MAP Meeting Sign In

Date: 5/18/16 Time: 10 am

Watershed: Fox River County: Waukesha State: WI

## Please provide us with the following information

Name: KRISTEN BELAN
Title: PROJECT MANAGER / RA SMITH NATIONAL
Community: VG. GENOA CITY Organization / Office:
Telephone: 262-317-3224 Email: kristen.belan@rasmithnational.com

Name: TANYA L LOURIGAN
Title: WATER MANAGEMENT ENGINEER
Community: WDNR Organization / Office: WDNR - FITCHBURG
Telephone: 608.275.3287 Email: tanya.lourigan@wi.gov

Name: Jeff Dolezal
Title: Director of DPW
Community: Village of Waterford Organization / Office:
Telephone: 262-210-2307 Email: jdolezal@waterfordwi.org

Name: David Simpson
Title: DPW
Community: Muskego Organization / Office:
Telephone: Email: dsimpson@cityofmuskego.org

Name: Paul Decker
Title: Chairman Waukesha County Board
Community: Waukesha City Organization / Office:
Telephone: 262-548-7003 Email: pdecker@waukeshacounty.gov

Name:
Title:
Community: Organization / Office:
Telephone: Email:

# Risk MAP Meeting Sign In

Date: 5/18/16 Time: 10 am

Watershed: Fox River County: Waukesha State: WI

## *Please provide us with the following information*

Name: MEG GALLOWAY
Title: CHIEF OF DAM & FLOODPLAIN SECTION
Community: Organization / Office: DNR
Telephone: 608 266 7014 Email: meg.galloway@wisconsin.gov

Name: Nathan Zaun
Title: WME
Community: Organization / Office: DNR
Telephone: 262 574-2188 Email: Nathan.Zaun@wi.gov

Name:
Title:
Community: Organization / Office:
Telephone: Email:

Name:
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Community: Organization / Office:
Telephone: Email:

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Title:
Community: Organization / Office:
Telephone: Email:

# Risk MAP Meeting Sign In

Date: 5/18/16 Time: 10 am

Watershed: Fox River County: Waukesha State: WI

## *Please provide us with the following information*

Name: Adam Trzebiatowski
Title: Planner
Community: City of Muskego Organization / Office:
Telephone: 262-679-5598 Email: adamt@cityofmuskego.com

Name: John Melland
Title: Principal Specialist
Community: SEWRPC Organization / Office:
Telephone: 608 295 5343 Email: jmelland@sewrpc.org

Name:
Title:
Community: Organization / Office:
Telephone: Email:

Name:
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Community: Organization / Office:
Telephone: Email:

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Community: Organization / Office:
Telephone: Email:

Name:
Title:
Community: Organization / Office:
Telephone: Email:

# Risk MAP Meeting Sign In

Date: 5/18/16 Time: 10 am

Watershed: Fox River County: Waukesha State: WI

## Please provide us with the following information

Name: JANE. KOLBERG
Title: ~~EO~~ PLANNING + ZONING SPECIALIST
Community: VILLAGE OF MENOMONEE FALLS Organization / Office:
Telephone: (262) 532-4276 Email: jkolberg@menomonee-falls.org

Name: Nicole Hewitt
Title: Stormwater - Water Resources
Community: City of New Berlin Organization / Office:
Telephone: 262-754-1754 Email: nhewitt@newberlin.org

Name: LAURA KLETTI
Title: CHIEF ENV. ENGINEER
Community: SEWRPC Organization / Office:
Telephone: 262-953-3224 Email: lkletti@sewrpc.org

Name: Ben Greenberg
Title: Senior Land Use Specialist
Community: Waukesha Co. Organization / Office: Waukesha Co.
Telephone: 262 548 7790 Email: bgreenberg@waukeshacounty.gov

Name: Ron Printz
Title: Principal Engineer
Community: SEWRPC Organization / Office:
Telephone: 262-547-6721 Email: rprintz@sewrpc.org

Name: Josh Murray
Title: Engineer
Community: SEWRPC Organization / Office:
Telephone: 262-953-3207 Email: jmurray@sewrpc.org

# Risk MAP Meeting Sign In

Date: 5/18/16 Time: 10 am

Watershed: Fox River County: Waukesha State: WI

***Please provide us with the following information***

Name: Gil Benn
Title: EM Director
Community: Kenosha Co. Organization / Office: Kenosha Co. EM
Telephone: 262-605-7900 Email: gilbenn@kenoshacounty.org

Name: Matt Carran
Title: Dir of Community Development
Community: Menomonee Falls Organization / Office:
Telephone: 262-532-4274 Email: mcarran@menomonee-falls.org

Name: SAM CHAKRAVORTY
Title: GIS SPECIALIST
Community: Organization / Office: IL STATE WATER SURVEY
Telephone: 217-300-3483 Email: samichak@illinois.edu

Name: Jason Zhang
Title: hydrologist
Community: Organization / Office: Il State Water Survey
Telephone: 847-460-4020 Email: zhang538@illinois.edu

Name: MARY RICHARDSON
Title: ENG ASS
Community: ILLINOIS Organization / Office: ILLINOIS STATE WATER SURVEY
Telephone: 217 300-3479 Email: mjr@illinois.edu

Name: Rich Wirtz
Title: Civil Engineer
Community: City of Pewaukee Organization / Office: Public Works/Engineering
Telephone: 262-691-0804 Email: wirtz@pewaukee.wi.us

# Risk MAP Meeting Sign In

Date: 05/18/16 Time: 0945

Watershed: Fox River County: Waukesha State: WI

## Please provide us with the following information

Name: Gail Goodchild
Title: Emergency Management Planner
Community: Waukesha County Organization / Office: Waukesha County Em Mgmt
Telephone: 262-446-5077 Email: ggoodchild@waukeshacounty.gov

Name: Greg Governatori
Title: ENGINEER
Community: BURLINGTON Organization / Office: KAPUR & ASSOCIATES
Telephone: 262-758-6010 Email: ggovernatori@kapurinc.com

Name: ANDY M. BUEHLER
Title: DIRECTOR PLANNING & DEVELOPMENT
Community: KENOSHA CO Organization / Office:
Telephone: 262-857-1892 Email: ANDY.BUEHLER@KENOSHACOUNTY.ORG

Name: CHAD SAMPSON
Title: COUNTY CONSERVATIONIST
Community: RACINE COUNTY Organization / Office: LAND CONSERVATION
Telephone: 262-886-8440 Email: chad.sampson@goracine.org

Name: Amy Barrows
Title: Planner
Community: Waukesha Co. Organization / Office:
Telephone: 2625487790 Email: aabarrows@waukeshacounty.gov

Name: Shannon Haydin
Title: Deputy Director - Land Use & Resource Management
Community: Walworth Co. Organization / Office:
Telephone: 262-741-7912 Email: Shaydin@co.walworth.wi.us

# Upper Fox River Watershed
# Comment Form

| Please provide the following information: | DATE: 5/18/16 |
|---|---|
| COUNTY NAME: WAUKESHA | COMMUNITY NAME: ? |
| NAME: MICHELLE HASE | TITLE: BEYOND AWESOME WME |
| ADDRESS: DNR – WAUKESHA | |
| DAYTIME PHONE: | E-MAIL: |

Use the space below to explain your comment and attach any necessary supporting documents/materials. Mark the location of your comment on the map by circling the area and writing the comment form number near the circle. If you have more than one comment, please use multiple forms. If necessary, please ask staff for assistance with formulating your comment.

**Comment Marked On:**

**DFIRM Panel #** ? **Other** ?

Please provide any additional information that might be helpful such as names of water bodies, cross section or addresses:

REVISED MODEL FOR
INCLUDE ASHIPPUN LAKE ON
THE NEW MAPS

Continue on back side if necessary. Please return form to: G. Fritz Statz, Wisconsin DNR, P. O. Box 7921, 101 S. Webster St., WT/3, Madison, WI 53707-7921. Form may be faxed to 608-267-2800 or e-mailed to gordon.statz@wisconsin.gov.

# Upper Fox River Watershed
# Comment Form

| Please provide the following information: | | DATE: 5-18-16 |
|---|---|---|
| COUNTY NAME: Waukesha | COMMUNITY NAME: City of Muskego | |
| NAME: Adam Trzebiatowski | TITLE: Planner | |
| ADDRESS: W182 S8200 Racine Ave | Muskego, WI 53150 | |
| DAYTIME PHONE: 262-679-5598 | E-MAIL: adamt@cityofmuskego.org | |

Use the space below to explain your comment and attach any necessary supporting documents/materials. Mark the location of your comment on the map by circling the area and writing the comment form number near the circle. If you have more than one comment, please use multiple forms. If necessary, please ask staff for assistance with formulating your comment.

**Comment Marked On:**

**DFIRM Panel #** 344 **Other** _____

Please provide any additional information that might be helpful such as names of water bodies, cross section or addresses:

Why are there zone "A" along Saturn Drive, + Enterprise Dr? Can't these be AE? We can provide culvert data in this area.

Continue on back side if necessary. Please return form to: G. Fritz Statz, Wisconsin DNR, P. O. Box 7921, 101 S. Webster St., WT/3, Madison, WI 53707-7921. Form may be faxed to 608-267-2800 or e-mailed to gordon.statz@wisconsin.gov.

# Upper Fox River Watershed
# Comment Form

| Please provide the following information: | DATE: 5-18-16 |
|---|---|
| COUNTY NAME: Waukesha | COMMUNITY NAME: City of Muskego |
| NAME: Adam Trzebiatowski | TITLE: planner |
| ADDRESS: W182 S8200 Racine Ave., 53150 | |
| DAYTIME PHONE: 262-679-5598 | E-MAIL: adamt@cityofmuskego.org |

Use the space below to explain your comment and attach any necessary supporting documents/materials. Mark the location of your comment on the map by circling the area and writing the comment form number near the circle. If you have more than one comment, please use multiple forms. If necessary, please ask staff for assistance with formulating your comment.

**Comment Marked On:**

**DFIRM Panel #** 456 **Other** _____

Please provide any additional information that might be helpful such as names of water bodies, cross section or addresses:

On the east shore of lake denoon there was some LOMC's that should alter the boundary.

Continue on back side if necessary. Please return form to: G. Fritz Statz, Wisconsin DNR, P. O. Box 7921, 101 S. Webster St., WT/3, Madison, WI 53707-7921. Form may be faxed to 608-267-2800 or e-mailed to gordon.statz@wisconsin.gov.

# Upper Fox River Watershed
# Comment Form

| Please provide the following information: | DATE: 5-18-16 |
|---|---|
| COUNTY NAME: Waukesha / SEWRPC | COMMUNITY NAME: |
| NAME: Josh Murray | TITLE: |
| ADDRESS: | |
| DAYTIME PHONE: 262-953-3207 | E-MAIL: jmurray@sewrpc.org |

Use the space below to explain your comment and attach any necessary supporting documents/materials. Mark the location of your comment on the map by circling the area and writing the comment form number near the circle. If you have more than one comment, please use multiple forms. If necessary, please ask staff for assistance with formulating your comment.

**Comment Marked On:**

**DFIRM Panel #**_____ **Other** Waukesha panels 307, 306, 302, 193, 189, 188, 186, 194, 192

Please provide any additional information that might be helpful such as names of water bodies, cross section or addresses:

new floodplain study underway for Pebble Creek / Brandy Brook -
currently waiting on new structure survey data for a few structures -
anticipated completion in 2017 - hope to incorporate as leverage study

Continue on back side if necessary. Please return form to: G. Fritz Statz, Wisconsin DNR, P. O. Box 7921, 101 S. Webster St., WT/3, Madison, WI 53707-7921. Form may be faxed to 608-267-2800 or e-mailed to gordon.statz@wisconsin.gov.

# Upper Fox River Watershed
# Comment Form

| Please provide the following information: | DATE: 5/18/16 |
|---|---|
| COUNTY NAME: WAUKESHA | COMMUNITY NAME: MENO FALLS |
| NAME: MATT CARRAN | TITLE: DIR. COM. DEV. |
| ADDRESS: W156 N8480 PILGRIM RD MF | |
| DAYTIME PHONE: (262) 532-4274 | E-MAIL: mcarran@menomonee-falls.com |

Use the space below to explain your comment and attach any necessary supporting documents/materials. Mark the location of your comment on the map by circling the area and writing the comment form number near the circle. If you have more than one comment, please use multiple forms. If necessary, please ask staff for assistance with formulating your comment.

**Comment Marked On:**

**DFIRM Panel #** 0094 **Other** _____

Please provide any additional information that might be helpful such as names of water bodies, cross section or addresses:

what is zone that is aqua in color? is it AE or A?
overlapping colors are confusing. (circled in blue dots)

Continue on back side if necessary. Please return form to: G. Fritz Statz, Wisconsin DNR, P. O. Box 7921, 101 S. Webster St., WT/3, Madison, WI 53707-7921. Form may be faxed to 608-267-2800 or e-mailed to gordon.statz@wisconsin.gov.

# Upper Fox River Watershed
# Comment Form

| Please provide the following information: | DATE: 5/18/16 |
|---|---|
| COUNTY NAME: Waukesha | COMMUNITY NAME: City of New Berlin |
| NAME: Nicole Hewitt | TITLE: Water Resources Engineer |
| ADDRESS: 3805 S Casper Dr | |
| DAYTIME PHONE: 262-754-1754 | E-MAIL: nhewitt@newberlin.org |

Use the space below to explain your comment and attach any necessary supporting documents/materials. Mark the location of your comment on the map by circling the area and writing the comment form number near the circle. If you have more than one comment, please use multiple forms. If necessary, please ask staff for assistance with formulating your comment.

**Comment Marked On:**

**DFIRM Panel #**_____ **Other** _____

Please provide any additional information that might be helpful such as names of water bodies, cross section or addresses:

352 – Root River - Dakota St, 130th St, West Branch ~ Zone A Changes

353 – Root River - Tess Corners Creek ~ Zone A changes

361 } ~~Root River - Tess Corners Creek ~ Zone A changes~~

362

Continue on back side if necessary. Please return form to: G. Fritz Statz, Wisconsin DNR, P. O. Box 7921, 101 S. Webster St., WT/3, Madison, WI 53707-7921. Form may be faxed to 608-267-2800 or e-mailed to gordon.statz@wisconsin.gov.

# Upper Fox River Watershed
# Comment Form

| Please provide the following information: | DATE: 5/18/16 |
|---|---|
| COUNTY NAME: Waukesha Co. | COMMUNITY NAME: Waukesha County |
| NAME: Amy Barrows | TITLE: Planner |
| ADDRESS: | |
| DAYTIME PHONE: 2625487790 | E-MAIL: aabarrows@waukeshacounty.gov |

Use the space below to explain your comment and attach any necessary supporting documents/materials. Mark the location of your comment on the map by circling the area and writing the comment form number near the circle. If you have more than one comment, please use multiple forms. If necessary, please ask staff for assistance with formulating your comment.

**Comment Marked On:**

**DFIRM Panel #** 270H **Other** and others

Please provide any additional information that might be helpful such as names of water bodies, cross section or addresses:

- effective FP's are based on outdated maps (2012 & 2014) It would be helpful if they could be updated to currently regulated maps

Continue on back side if necessary. Please return form to: G. Fritz Statz, Wisconsin DNR, P. O. Box 7921, 101 S. Webster St., WT/3, Madison, WI 53707-7921. Form may be faxed to 608-267-2800 or e-mailed to gordon.statz@wisconsin.gov.

# Upper Fox River Watershed
## Comment Form

| Please provide the following information: | DATE: 5/18/16 |
|---|---|
| COUNTY NAME: Waukesha | COMMUNITY NAME: New Berlin |
| NAME: Laura Kletti | TITLE: Chief Env. Engineer |
| ADDRESS: SEWRPC | |
| DAYTIME PHONE: 262-953-3224 | E-MAIL: lkletti@sewrpc.org |

Use the space below to explain your comment and attach any necessary supporting documents/materials. Mark the location of your comment on the map by circling the area and writing the comment form number near the circle. If you have more than one comment, please use multiple forms. If necessary, please ask staff for assistance with formulating your comment.

**Comment Marked On:**

**DFIRM Panel #** 352/353 **Other** _____

Please provide any additional information that might be helpful such as names of water bodies, cross section or addresses:

As part of our Root River MCAMLIS effort, we have draft geoRAS models for the West Branch Root River, Dakota Branch, 130th St. Trib & Tess Corners Creek. Redline as Zone A w/ your project. We hope to have flows done this year (HSPF) for entire RR watershed. Hope for detailed mapping by end of 2017. Email me as you know your Risk MAP prelim schedule.

Continue on back side if necessary. Please return form to: G. Fritz Statz, Wisconsin DNR, P. O. Box 7921, 101 S. Webster St., WT/3, Madison, WI 53707-7921. Form may be faxed to 608-267-2800 or e-mailed to gordon.statz@wisconsin.gov.

# Upper Fox River Watershed
# Comment Form

| Please provide the following information: | DATE: 5-18-16 |
|---|---|
| COUNTY NAME: Kenosha / SEWRPC | COMMUNITY NAME: |
| NAME: Josh Murray | TITLE: |
| ADDRESS: | |
| DAYTIME PHONE: 262 - 953-3207 | E-MAIL: jmurray@sewrpc.org |

Use the space below to explain your comment and attach any necessary supporting documents/materials. Mark the location of your comment on the map by circling the area and writing the comment form number near the circle. If you have more than one comment, please use multiple forms. If necessary, please ask staff for assistance with formulating your comment.

**Comment Marked On:**

**DFIRM Panel #** 0161 - Kenosha Co **Other** _____

Please provide any additional information that might be helpful such as names of water bodies, cross section or addresses:

UT1 to Hooker Lake - new study/delineation approved by WDNR, LOMR being reviewed by FEMA

Continue on back side if necessary. Please return form to: G. Fritz Statz, Wisconsin DNR, P. O. Box 7921, 101 S. Webster St., WT/3, Madison, WI 53707-7921. Form may be faxed to 608-267-2800 or e-mailed to gordon.statz@wisconsin.gov.

# Upper Fox River Watershed
# Comment Form

| Please provide the following information: | DATE: |
|---|---|
| COUNTY NAME: | COMMUNITY NAME: |
| NAME: | TITLE: |
| ADDRESS: | |
| DAYTIME PHONE: | E-MAIL: |

Use the space below to explain your comment and attach any necessary supporting documents/materials. Mark the location of your comment on the map by circling the area and writing the comment form number near the circle. If you have more than one comment, please use multiple forms. If necessary, please ask staff for assistance with formulating your comment.

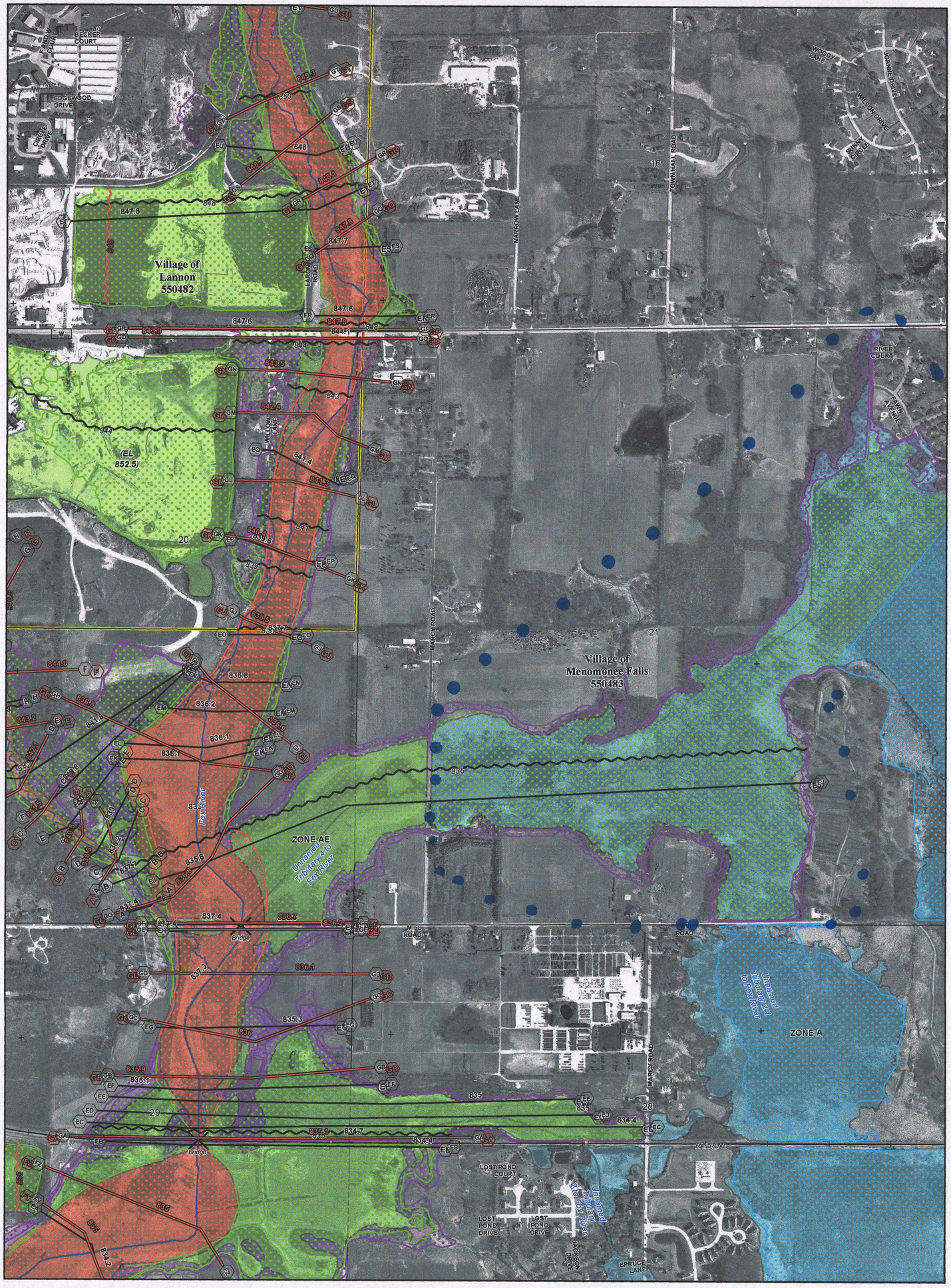
**Comment Marked On:**

**DFIRM Panel #** 0142 **Other** Racine 0151 0276

Please provide any additional information that might be helpful such as names of water bodies, cross section or addresses:

Check our limit of study lines

Continue on back side if necessary. Please return form to: G. Fritz Statz, Wisconsin DNR, P. O. Box 7921, 101 S. Webster St., WT/3, Madison, WI 53707-7921. Form may be faxed to 608-267-2800 or e-mailed to gordon.statz@wisconsin.gov.




Map Projection: NAD 1983 UTM Zone 16N
Vertical Datum: NAVD 88 (1991) Effective BFEs [+ 0.1' ] =
NAVD 88 (2012) Proposed BFEs

**DRAFT**

N

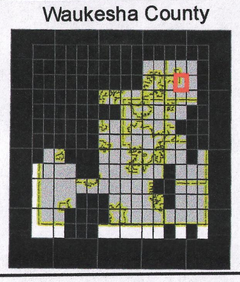
# Upper Fox Watershed
# Waukesha County, WI
# PMR WORKMAPS

Panel Contains:

| COMMUNITY | PANEL | SUFFIX |
|---|---|---|
| WAUKESHA COUNTY | 0094 | H |

## PANEL LOCATOR

Waukesha County



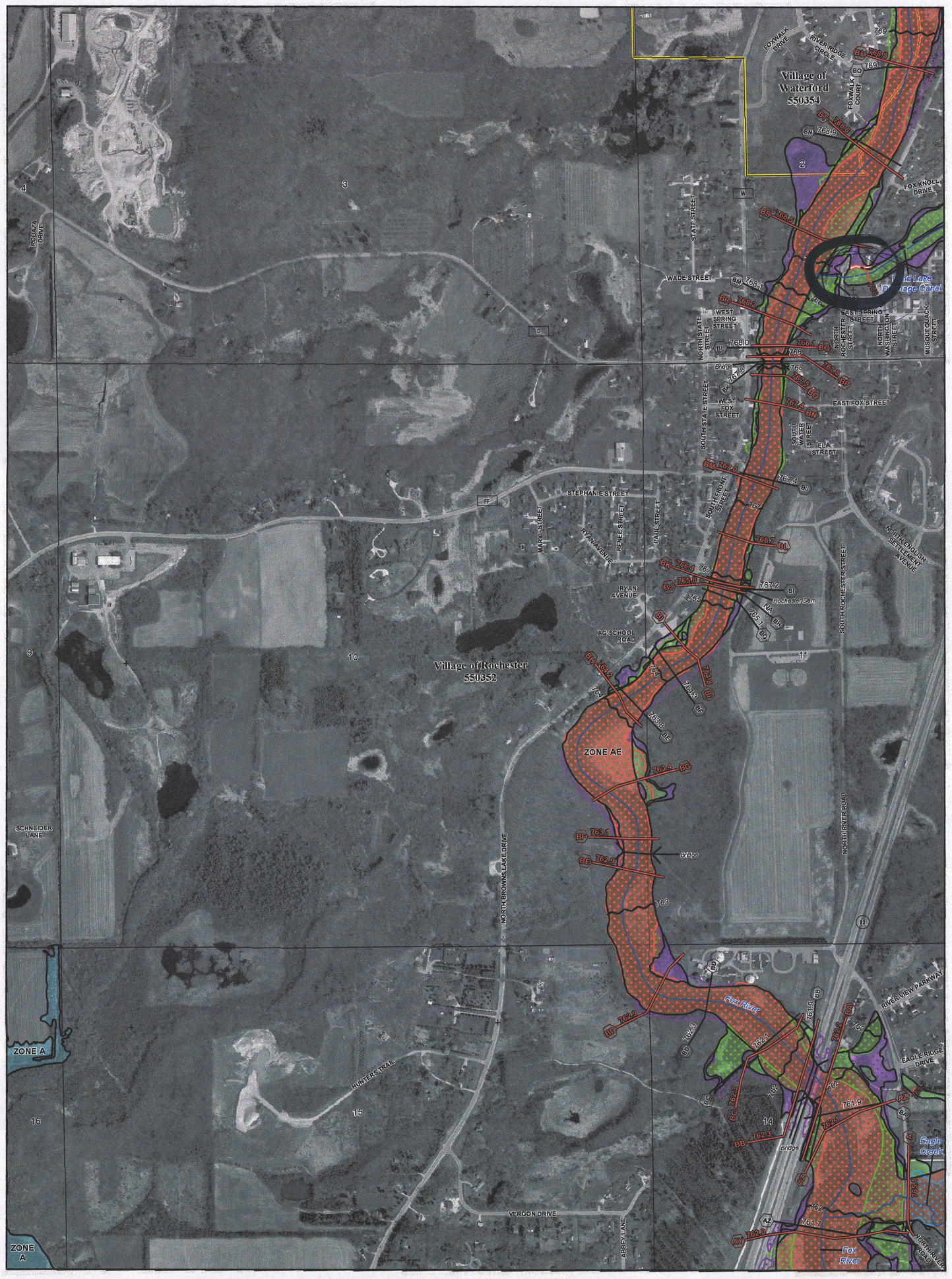
## MAP SYMBOLOGY

| | A | AE | AE, Floodway | X, 0.2 % | Cross Sections with 1% Annual Chance | Base Flood Elevation (BFE) |
|---|---|---|---|---|---|---|
| Effective (5/02/2012) | | (EL 789) | | | A 789.2 | ~789~ |
| Proposed | | (EL 789) | | | A 789.2 | ~789~ |

0 1,000 2,000 4,000 Feet

Release Date: TBD

FEMA

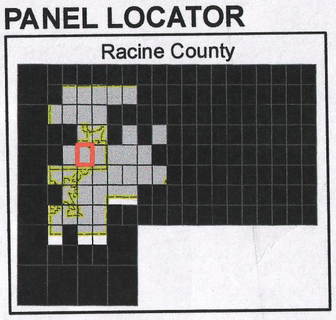



Map Projection: NAD 1983 UTM Zone 16N
Vertical Datum: NAVD 88 (1991) Effective BFEs [+ 0.0' ] =
NAVD 88 (2012) Proposed BFEs

**DRAFT**

N

## PANEL LOCATOR




## MAP SYMBOLOGY

| | A | AE | AE, Floodway | X, 0.2 % | Cross Sections with 1% Annual Chance | Base Flood Elevation (BFE) |
|---|---|---|---|---|---|---|
| Effective (5/02/2012) | | (EL 789) | | | A 789.2 | 789 |
| Proposed | | (EL 789) | | | A 789.2 | 789 |

0 1,000 2,000 4,000 Feet

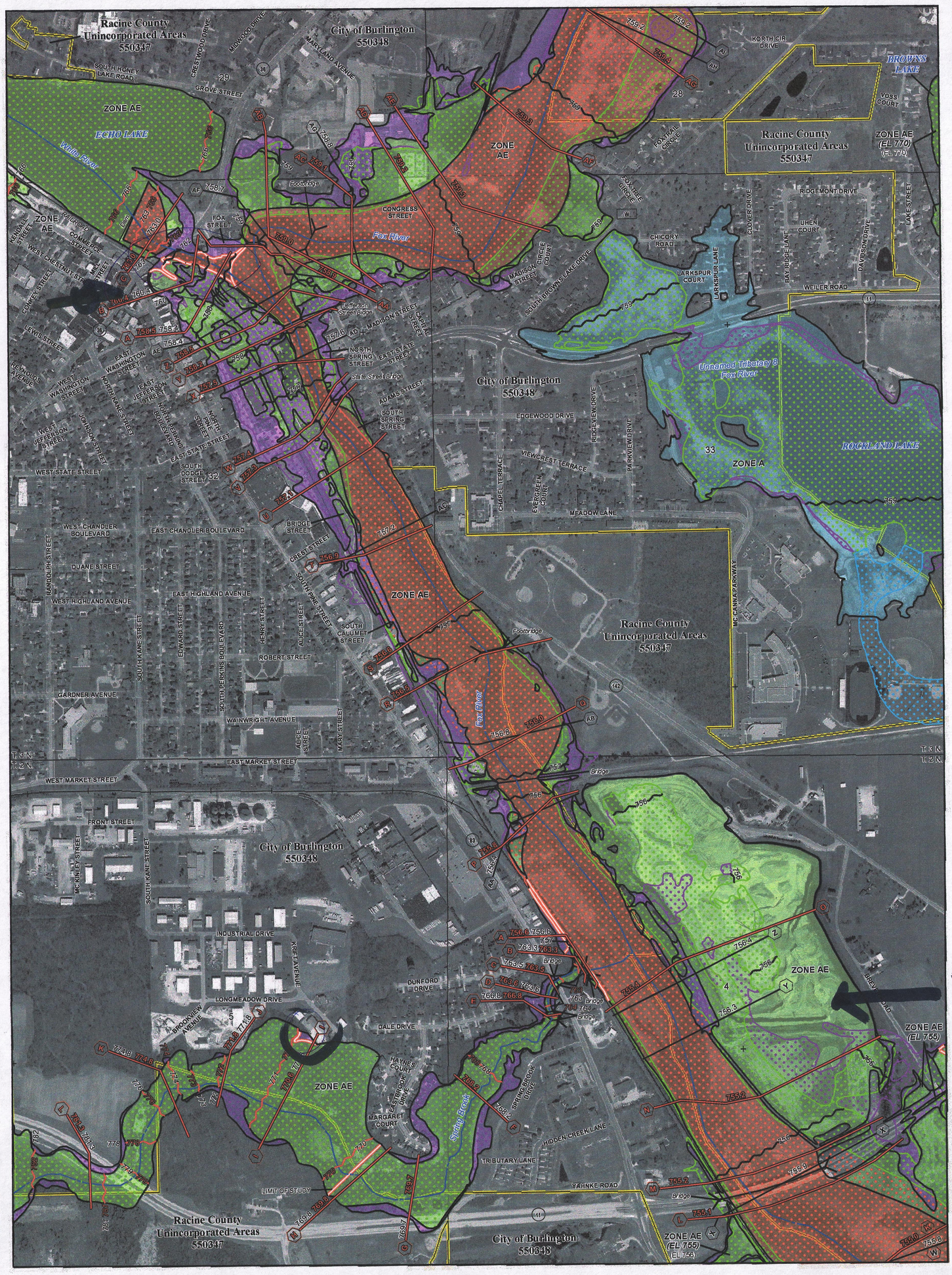
# Upper Fox Watershed
# Racine County, WI
# PMR WORKMAPS

Panel Contains:

| COMMUNITY | PANEL | SUFFIX |
|---|---|---|
| ROCHESTER, VILLAGE OF | 0151 | E |
| WATERFORD, VILLAGE OF | 0151 | E |

Release Date: TBD

FEMA



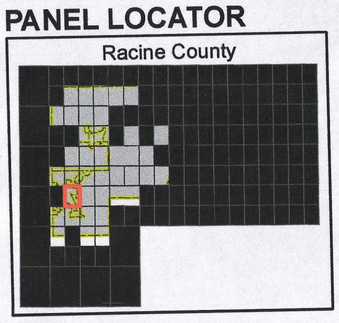

Map Projection: NAD 1983 UTM Zone 16N
Vertical Datum: NAVD 88 (1991) Effective BFEs [+ 0.0' ] =
NAVD 88 (2012) Proposed BFEs

**DRAFT**

N

## Upper Fox Watershed
## Racine County, WI
## PMR WORKMAPS

### PANEL LOCATOR




### MAP SYMBOLOGY

| | A | AE | AE, Floodway | X, 0.2 % | Cross Sections with 1% Annual Chance | Base Flood Elevation (BFE) |
|---|---|---|---|---|---|---|
| Effective (5/02/2012) | | (EL 789) | | | A 789.2 | 789 |
| Proposed | | (EL 789) | | | A 789.2 | 789 |

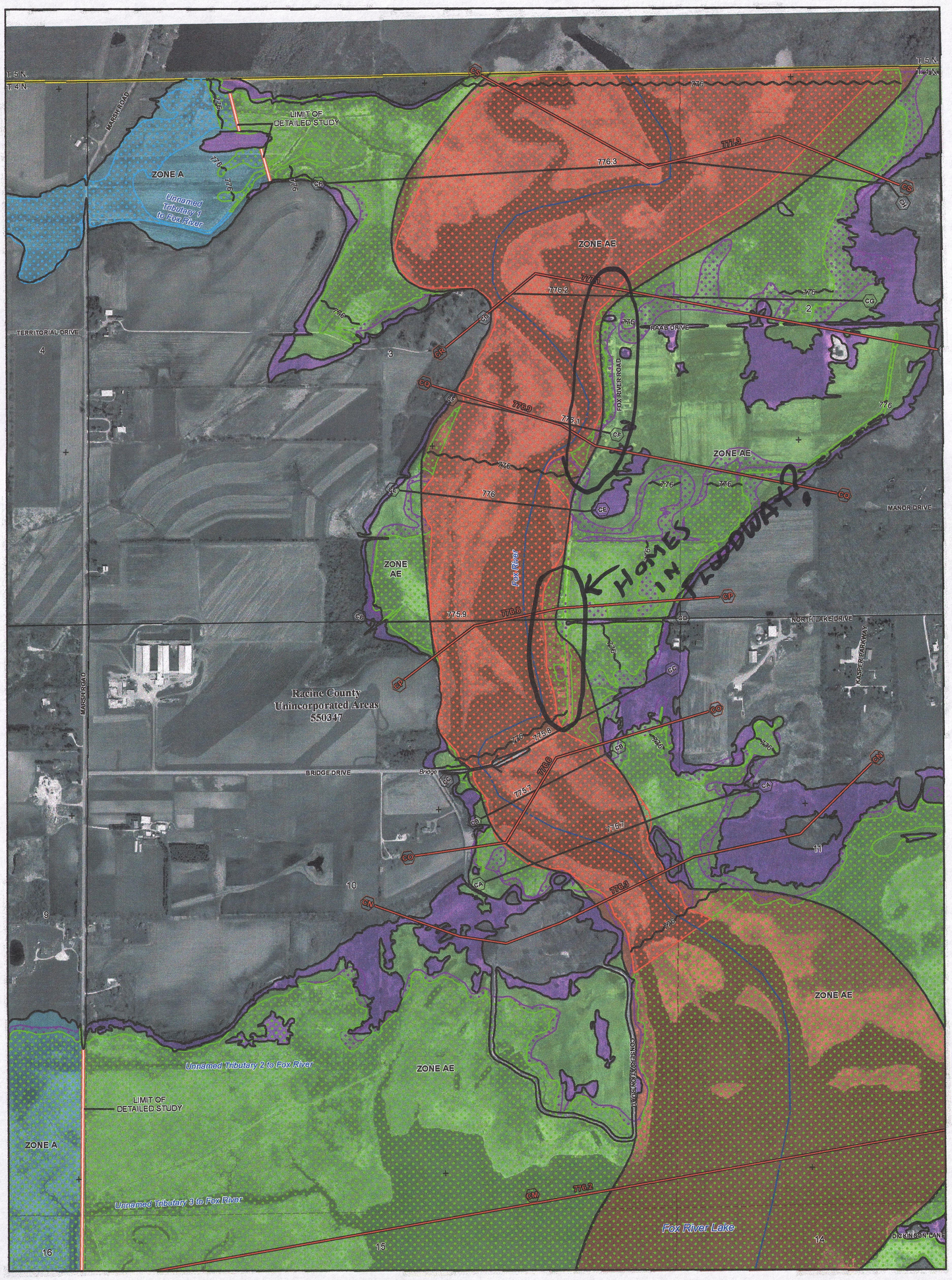
0 1,000 2,000 4,000 Feet

Panel Contains:

| COMMUNITY | PANEL | SUFFIX |
|---|---|---|
| BURLINGTON, CITY OF | 0142 | E |
| RACINE COUNTY | 0142 | E |

Release Date: TBD

FEMA



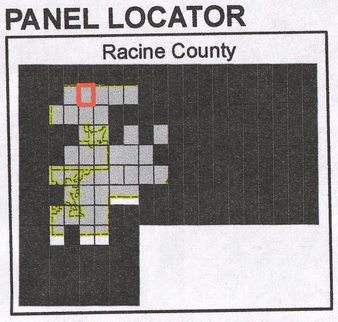

Map Projection: NAD 1983 UTM Zone 16N
Vertical Datum: NAVD 88 (1991) Effective BFEs [+ 0.0' ] =
NAVD 88 (2012) Proposed BFEs

**DRAFT**

N

# Upper Fox Watershed
# Racine County, WI
# PMR WORKMAPS

## PANEL LOCATOR




## MAP SYMBOLOGY

| | A | AE | AE, Floodway | X, 0.2 % | Cross Sections with 1% Annual Chance | Base Flood Elevation (BFE) |
|---|---|---|---|---|---|---|
| Effective (5/02/2012) | | (EL 789) | | | A 789.2 | 789 |
| Proposed | | (EL 789) | | | A 789.2 | 789 |

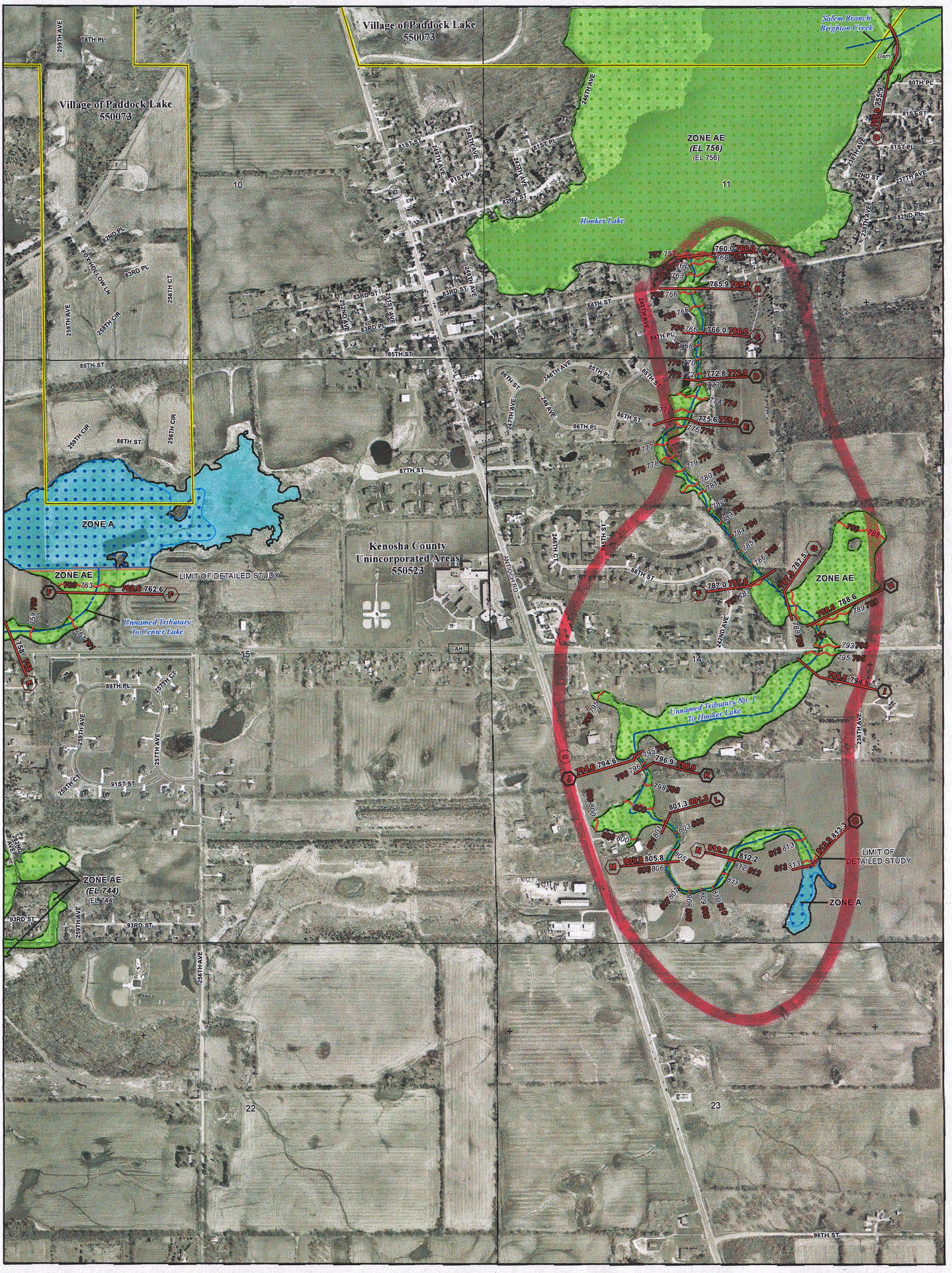
0 1,000 2,000 4,000 Feet

Panel Contains:

| COMMUNITY | PANEL | SUFFIX |
|---|---|---|
| RACINE COUNTY | 0028 | E |

Release Date: TBD

FEMA




Map Projection: NAD 1983 UTM Zone 16N
Vertical Datum: NAVD 88 (1991) Effective BFEs [+ 0.0' ] =
NAVD 88 (2012) Proposed BFEs

**DRAFT**

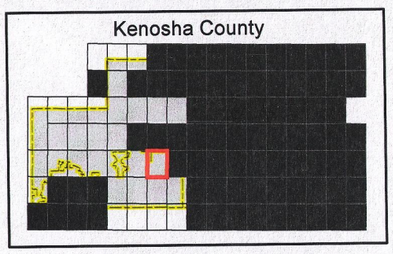
N

## Upper Fox Watershed
## Kenosha County, WI
## PMR WORKMAPS

Panel Contains:

| COMMUNITY | PANEL | SUFFIX |
|---|---|---|
| KENOSHA COUNTY | 0161 | E |
| PADDOCK LAKE, VILLAGE OF | 0161 | E |

### PANEL LOCATOR




### MAP SYMBOLOGY

| | A | AE | AE, Floodway | X, 0.2 % |
|---|---|---|---|---|
| Effective (6/19/2012) | | (EL 789) | | |
| Proposed | | (EL 789) | | |

Cross Sections with 1% Annual Chance: A 789.2 / A 789.2

Base Flood Elevation (BFE): 789 / 789

0 1,000 2,000 4,000 Feet

Release Date: TBD

FEMA

# Flood Risk Review Meeting: Upper Fox River Watershed

**Waukesha, Wisconsin**

**10:00am**
**May 18, 2016**

RiskMAP
Increasing Resilience Together

## Introductions

- **Risk MAP Project Team, Wisconsin Department of Natural Resources (WDNR)**
  - Fritz Statz - Project Lead
  - Michelle Staff - NFIP Coordinator
  - Chris Olds - Floodplain Engineer
  - Michelle Hase, Nathan Zoch, Tanya Lourigan – Regional Engineers
  - Meg Galloway – Dam Safety/Floodplain Section Supervisor
- **Wisconsin Emergency Management (WEM)**
  - Katie Sommers – State Hazard Mitigation Officer
  - Roxanne Gray – Mitigation Section Supervisor



## Meeting Goals

Community input throughout the FEMA map revision process is essential to flood risk management. You are getting the first possible look at the analyses and DRAFT results so that you can provide your feedback early on.

- Provide an overview of the hydrologic and hydraulic analysis
- Present the DRAFT results
- Answer questions about the analysis
- Collect your concerns/feedback/technical data



## Risk MAP Project Status

- **What is Risk MAP?**
  - Risk **M**apping, **A**ssessment, and **P**lanning
  - Builds off of previous FEMA map revision projects
- **Initial countywide mapping**
  - Kenosha – 6/19/2012
  - Racine – 5/2/2012
  - Walworth – 10/2/2009
  - Waukesha – 11/19/2008
- **Revisions to countywide mapping**
  - Waukesha – 2/19/2014, 11/5/2014
  - Walworth – 9/3/2014

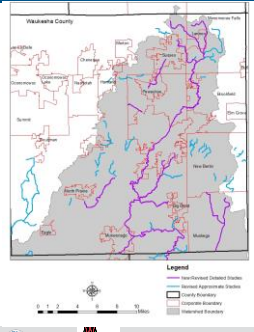


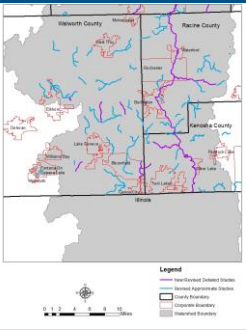
## Risk MAP Project Status

- **Where have we been with the Upper Fox?**
  - Discovery 11/13/2012 – Waukesha & Burlington
    - Reviewed flood risk data gathered from across the watershed
    - Discussed your flooding history, development plans, flood risk concerns, stormwater management activities, and other daily operations that impact flood risk
    - Reviewed your mitigation planning and project activities and status
  - Action Focused Discovery 2/11/2014 & 2/18/2014
    - Brookfield, New Berlin, Muskego, Kenosha County, Menomonee Falls, Racine County, Walworth County, Washington County Waukesha County met to discuss specific mitigation opportunities in the watershed



## Revised Study Reaches



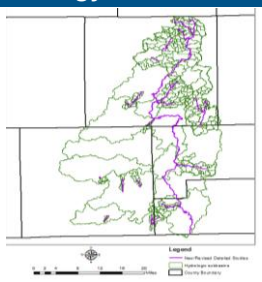
## Revised Detailed Study Reaches

- Benedict Lake
- Eagle Creek
- Eagle Lake
- East Branch Nippersink Creek
- East Channel Fox River
- Fox River
- Fox River Tributary 2
- Geneva Lake Tributary
- Jewel Creek
- Little Muskego Lake
- Mill Brook
- Mukwonago River Tributary
- Muskego Canal
- Muskego Lake
- New Munster Creek
- Ore Creek Tributary
- Ore Creek Tributary Overflow
- Pebble Brook
- Pebble Brook Split Flow
- Pebble Brook Tributary
- Pewaukee River
- Pewaukee Lake Tributary
- Powers Lake Tributary
- Quietwood Creek
- Spring Brook
- Sugar Creek Tributary
- Sugar Creek Tributary Overflow
- White River Tributary
- White River Tributary Overflow
- Willow Springs Creek



## Detailed Study Hydrology

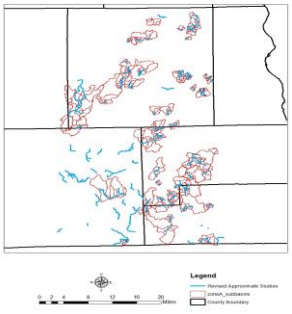
- **HEC-HMS v. 3.5**
- **Soil Conservation Service Curve Number method**
  - Land use data (SEWRPC)
  - Soil data (NRCS SSURGO)
- **Delineated: HEC-GeoHMS**
- **Transformation: SCS Unit Hydrograph/TR-55**
- **Routing: Muskingum-Cunge**
- **Rainfall: WI custom distribution**
- **Critical duration analysis**
- **Storage: regulated wetlands**
- **Calibration: June 2008**
  - Muskego Canal, Fox River, Fox River Tributary 2, Pewaukee River, Pewaukee Lake Tributary, Willow Springs Creek






## Approximate Study Hydrology

- **HEC-HMS v. 3.5**
- **Soil Conservation Service Curve Number method**
  - Land use data (SEWRPC)
  - Soil data (NRCS SSURGO)
- **Delineated: HEC-GeoHMS**
- **Transformation: SCS Unit Hydrograph/CN lag time**
- **Routing: Muskingum-Cunge**
- **Rainfall: SCS Type-II**
- **24-hour duration event**
- **Storage: none**
- **Calibration: match existing detailed flows where available**






## Detailed Study Hydraulics

- **HEC-RAS v. 4.1**
- **Surveyed stream channels and structures completed fall of 2013**
- **Overbank geometry extracted using HEC-GeoRAS and county LiDAR**
- **NAVD88 vertical datum**
- **Interpolated cross sections where necessary for model stabilization**
- **Contraction/Expansion Coefficients of 0.3/0.5 at most structures**
- **Manning's N values estimated from aerial photography and survey photos**
- **Boundary conditions:**
  - Receiving stream corresponding event elevation when peaks coincide
  - Receiving stream 10-year event when receiving stream peaks after studied stream
  - Normal depth when stream downstream of last cross section is unstudied
- **Split flow modeled where necessary using junctions in HEC-RAS**
- **Calibration: June 2008**
  - Fox River, Muskego Canal, Big Muskego Lake, Little Muskego Lake



## Approximate Study Hydraulics

- **HEC-RAS v. 4.1**
- **Structures:**
  - Entered as bridges/culverts where DOT plans available
  - Entered as inline structures with a notch width estimated from aerial photos
- **All geometry extracted using HEC-GeoRAS and county LiDAR**
- **NAVD88 vertical datum**
- **Interpolated cross sections where necessary for model stabilization**
- **Ineffective flow used to model floodways at constrictions**
- **Manning's N values estimated from aerial photography and survey photos**
- **Boundary conditions:**
  - Receiving stream corresponding event elevation when peaks coincide
  - Receiving stream 10-year event when receiving stream peaks after studied stream
  - Normal depth when stream downstream of last cross section is unstudied



## What Next?

- **Review maps/models**
- **Mitigation action form**
- **Work together to coordinate on:**
  - Mitigation planning
  - Grant applications or technical assistance
  - Communication
- **Please pick up a CD with this data before you leave**
- **We will send a follow-up email with resources and links**

# Questions & Discussion

- **Maps, Scheduling**: Fritz Statz
- **NFIP, Ordinance**: Michelle Staff
- **Engineering, Mitigation Action Form**: Chris Olds
- **Mitigation, Emergency Management**: Katie Sommers & Roxanne Gray

*Thanks for participating! We'll be communicating again soon.*