



Department of Public Works
City Engineering Division

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May 8, 2007

Robert M. Watson
WDNR - WT6
101 S WEBSTER ST
MADISON WI 53702

RE: PROTESTS AND APPEALS TO THE PROVISIONAL FEMA FIRM MAPS

Dear Bob,

In the last few months, you and other WDNR staff has been working with Greg Fries, of my staff, regarding specific concerns that the City of Madison has regarding the provisional floodplain maps.

To help inform residents of the issue, the City notified all residents touched by the revised maps and invited them to attend either or both of two (2) scheduled informational meetings, on the mapping process, held by the City.

Those meetings provided insight into several significant concerns of our residents, and quite frankly the Engineering Division. We are submitting several formal protests, one (1) appeal, and comments on areas where we believe there are technical/graphic errors on the maps that require review/analysis by the Department.

In addition to the formal protests and appeals, there is at least one general global issue that came up repeatedly at our meetings and in phone calls to staff. That issue is the lake level management of Lake Mendota.

Specifically, many residents expressed concern that the 100-year flood elevation of Lake Mendota was raised, protecting downstream properties, at the expense of placing their properties in the floodplain. This concern is made more salient when it is clear to all parties that Lake Mendota is a totally managed system. The "management" strategy described above has been followed for recent memory, however based on review of the current provisional maps it has obviously reached its practical limit. The "provisional" maps issued by the Department indicate the locks being breached and the two lakes operating as one during the 100-year event. While better data, supplied by the City, refute that conclusion, it is clear that the management strategy must be modified or the locks and surrounding area must be raised.

City Engineering understands that the branch of the Department doing this analysis is not the same group responsible for setting lake management strategy. However, this point is

somewhat lost on a public who see the Department as one coordinated agency. We request that lake-level policy be reviewed by the Department and Dane County, and have copied the Lakes and Watershed Commission on this correspondence. The City of Madison, would like to participate in this process, at such time as it becomes appropriate for us to do so.

Following is a summary of the areas that are addressed with more detailed information as part of this correspondence:

APPEALS

- 1) **Portage/Hayes -- Starkweather Creek** -- this area was discussed with Department Staff (Bob Watson) several times, most recently a meeting on-site with the Airport.

Strand Associates was retained to update the existing model to include the existing culverts, ditch work and revised hydrology provided by the Department. The Departments "provisional" HEC-RAS model was used as a starting point and modified with corrected cross sections and topographic data from the City's LIDAR data.

Detailed information, including a revised HEC-RAS files, maps and a report on Strand's work are provided both in hard copy and in electronic copy for the Departments use.

- 2) **Cherokee Marsh** -- protest information is provided following -- however we believe there is a technical error with the maps.

Specifically, in this area, the Departments maps do not recognize that there are culverts under Comanche Way at the East end of Menomonie Lane. These culverts (record drawing attached), effectively act as equalizer pipes between the golf course and the ditch behind Menomonie Lane. The "provisional" maps show two (2) different elevations on either side of Comanche Way, this cannot be substantiated by the existence of these culverts.

We request the Department review its HEC-RAS work in this area and include the existing culverts in its analysis, as the current "provisional maps" and differing elevations cannot be correct.

The attached CD includes both a WORD document showing an aerial photo of the area with the City's record drawings overlain and a PDF of our records showing size and location of the pipes referenced above. This information is included in the CHEROKEE MARSH sub-folder.

- 3) **Starkweather Creek @ Lake Monona** – a review of the plan view of the “provisional” FIRM maps show elevations that indicates that the 100-year profile is at elevation 848 at the lake then falls, as you move upstream, to elevation 847, then begins to rise again to 848 and beyond as you move upstream.

As Starkweather, in this area, is a backwater of Lake Monona we would expect the elevation to remain constant at 848. The plan view (FIRM) is also not consistent with the detailed profiles of Starkweather in this area. A PDF scan file of the FIRM map is included in the Starkweather_at_L_Monona folder on the CD showing the information discussed above.

Additionally, we believe the Dane County DEM is could be improved in this area and have provided a DGN file for this area in the same folder. This file contains the 848 contour. Consistent with our other protests this data is provided with the intent that the Department could simply use our contour as the limits of the floodplain in this area.

We request the Department to review the HEC-RAS files in this area.

- 4) **Upper Badger Mill Creek @ Nesbitt Road/Maple Grove Drive** – All the lots to the East of Maple Grove Drive on the small tributary to the main channel of Upper Badger Mill Creek have been removed from the floodplain based on LOMA-F. Further the Channel has been relocated and the culvert under Maple Grove Removed and replaced with a series of culverts under Nesbitt Road (SEE PDF OF RECORDS on CD). Copies of all the LOMA's are included in the subfolder Upper_BadgerMill_Creek. The area to the East of Maple Grove Road should be removed from the floodplain completely based on this information.

We request the Department to review the information and revised the provisional maps accordingly.

PROTESTS

GENERAL COMMENTS – The City has provided two .dgn files for each of these areas. The first shows only the contour generated through the use of the City of Madison LIDAR data. The second .dgn file will has the same file name except that mod1.dgn has been appended to the end of the file. These files include contours provided by private surveyors as part of individual protests. The City has clipped these more detailed contours into our contour line so that there remains only one contour line for the Department to import into its model. In the modified file the area modified is on a different level and is a different color. A level schematic on this is included with this packet.

- 1) **Shoreline of Lake Mendota** – The City of Madison contracted with Ayres (the consultant responsible for creation of our LIDAR survey of the City) to create an 853 (NAVD-88) contour for the entire shoreline of Lake Mendota covered by our LIDAR data. A three (3) dimensional contour is contained in a .dgn file for the use of the Department. This contour was created with the intent that the Department could cut out the corresponding contour in their file and use this contour instead.
- 2) **Cherokee Marsh** – The City of Madison has provided three (3) dimensional contours of elevation 854 and 856 for the area North of the bridge crossing under Northport Drive (STH 113). As discussed above, the intent is that the WDNR would be able to remove their contours in this area and replace with files provided by the City of Madison.
- 3) **Clove Drive – West Branch of Starkweather Creek** – On the current maps, many of the homes adjacent to this area have been removed from the floodplain based on LOMA's.

We have provided two (2) three dimensional contours for the area 862 & 864 as the floodplain elevations vary between these contours. As discussed previously it was our intent to allow the Department to clip our contours into the Departments files and allow them to be used to define the new limits of the floodplain.

We request that the Department complete this action

Additionally, we believe that the water surface profile in the immediate area upstream of STH 51 will be lowered considerably due to revised mapping work proposed by the airport.

If the airport's LOMR is approved prior to the maps becoming final (we believe this to be in the best interest of all parties), it is our understanding the Department would be required to re-run the HEC-RAS in this area. This new model run would take into account the airports changes and reflect those changes as they propagate upstream toward Portage and Hayes Roads where they would tie-into the work done by Strand on behalf of the City of Madison.

If it would assist the Department the City of Madison would agree to have our agent (Strand) complete that work. Please let us know if you would prefer to proceed in that manner.


- 4) **Monona Bay/Lake Monona** – While the flood elevations for Lake Monona have not changed – the area shown as flooding has increased considerably, especially in the immediate area of the bay. The City has provided a .dgn file that shows the three dimensional 848 contour on NAVD 88 and County Coordinate System with the intent that this contour could be “clipped” into the file and used by the WDNR to determine the limits of the floodplain.

- 5) **Marsh/Voges Area** -- This area has undergone extensive grading since the Dane County DEM was created, and the elevations shown on the "provisional" maps are not current. The City has provided a .dgn file showing several three dimensional contours 860, 862, & 864 on NAVD 88 and County Coordinate System with the intent that this contour could be "clipped" into the file and used by the WDNR to determine the limits of the floodplain.

City Engineering would greatly appreciate a written response to each of our issues of concern. If you have questions on the intent of our protest/appeals please contact Greg Fries at 608-267-1199 or gfries@cityofmadison.com , if you have questions on the CAD design files provided please contact John Reimer at 608-266-4094 or jreimer@cityofmadison.com

Thank you for your attention to these requests and your work on this complicated project.

Sincerely,



Larry D. Nelson, P.E.
for City Engineer

LDN:gtf

cc: John Reimer, City Engineering
Tim Troester, City Engineering
Jeff Benedict, City Engineering
Mike Dailey, City Engineering