The Wilmington Area Ice Jam on the Lower Kankakee River During January 2024

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1.0 Introduction

A significant ice jam occurred on the lower Kankakee River in the general area of I-55 and Wilmington from January 15 to January 26, 2024. The ice jam was preceded by a period of very cold air temperatures and elevated streamflow levels. At peak extent, it is estimated that the ice jam covered an area from near Bardwell Island and the Will-Grundy county line upstream for approximately 12 miles to near Custer Park. While this ice jam was in place, multiple instances of flooding occurred at different locations along its reach. In addition to flooding, ice flow damage was also noted in some areas.

2.0 Meteorological and Hydrological Conditions

After a mild start to January 2024, a significant arctic airmass moved into the Midwest and Great Lakes regions during the middle of the month (Figure 1). Temperatures associated with this airmass were 20°F to 30°F below the 30-year average in some areas. Just prior to the onset of significantly below average temperatures, a combination of rain and snowfall occurred across the region, with the Kankakee River Basin seeing a combination of rain and snow. Some of the snowfall melted due to warm ground temperatures and provided a slight contribution to runoff due to rainfall. This runoff caused water levels to rise in the Kankakee River and tributaries just prior to the cold weather (Figure 2). Ice cover on area rivers was almost non-existent for the first half of January due to above average water temperatures several degrees above freezing.

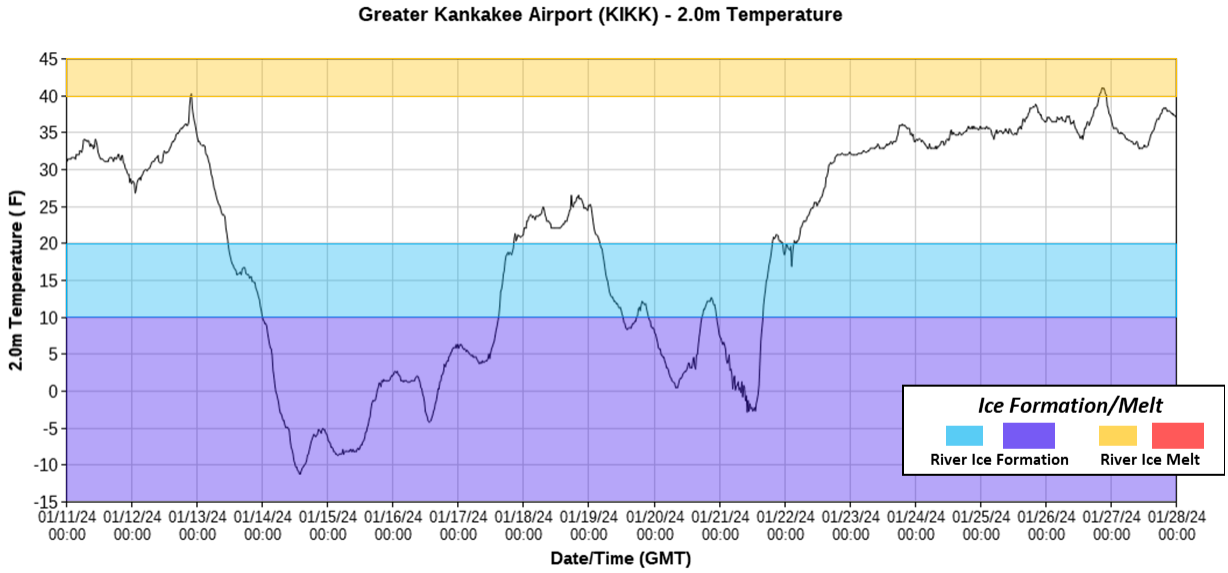

Figure 1. Temperatures observed at the Kankakee Airport from January 11 to January 27, 2024. Temperature plot from Mesowest. Rough thresholds for widespread river ice formation and melt were added for illustration.

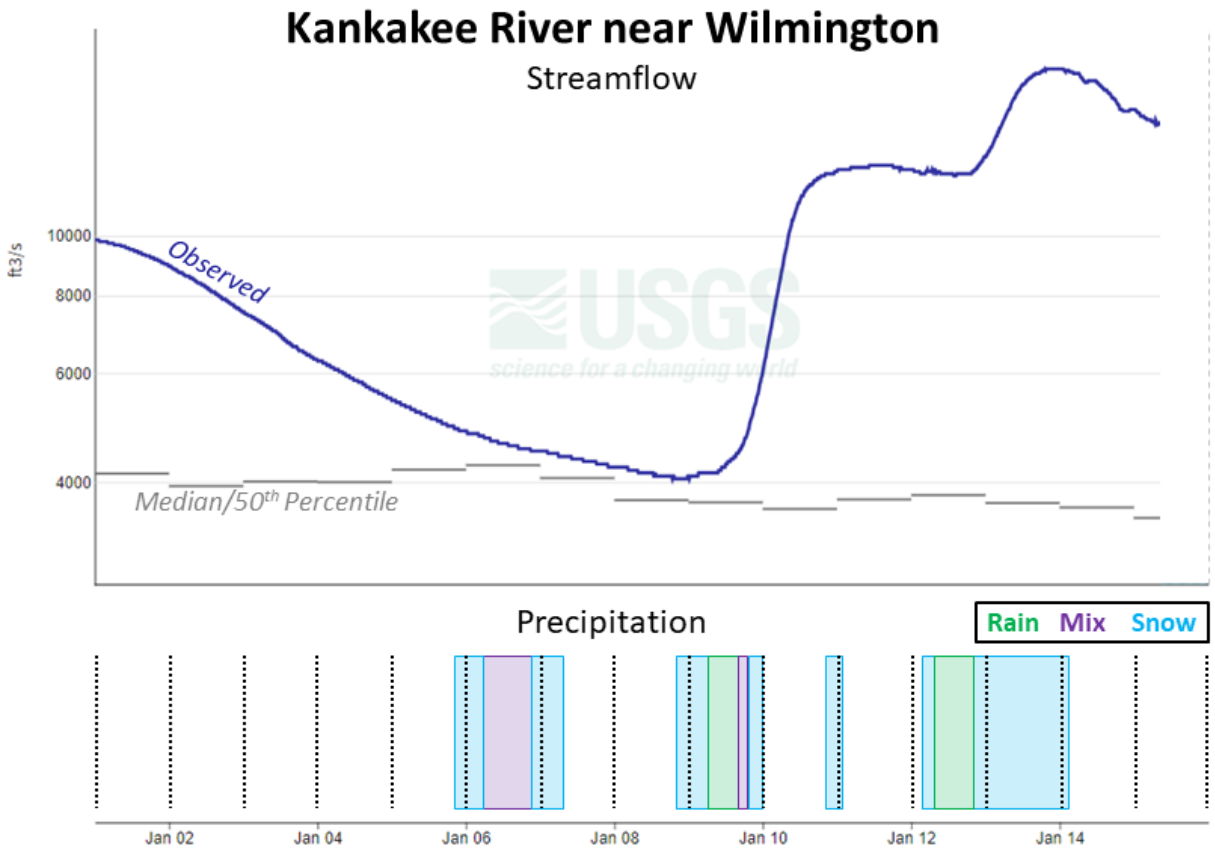

Figure 2. Streamflow and precipitation on the Kankakee River near Wilmington in early January 2024. Precipitation based upon observations taken at Joliet Airport. Streamflow measurements from the USGS.

On January 13, temperatures began a quick drop from near 40°F to near -10°F the following day. As a general guide, temperatures averaging below 20°F are favorable for river ice formation on most area rivers and temperatures averaging below 0°F are favorable for rapid river ice formation on almost all area rivers. An extended period of time (around 24 hours or more) exceeding these thresholds is typically required to see the indicated ice effects. After the drop below 20F on January 13, temperatures only briefly warmed above 20°F around January 18 before dropping again and remaining below until late on January 21. After temperatures dropped below 0°F early on January 14, they remained below for approximately 24-36 hours until late on January 15. Weather conditions were thus very favorable for widespread river ice formation for an extended period (about 7 days), including the rapid formation of heavy ice cover, despite relatively warm air and water temperatures prior to the arrival of the very cold temperatures.

On January 22, temperatures warmed to near the freezing mark, ending the period of favorable conditions for river ice. For the next several days, temperatures were generally in the mid 30s, briefly reaching near 40°F on a few instances. Temperatures were potentially several degrees warmer in the headwaters of the Kankakee River Basin (closer to Watseka and Rennselaer), but did not reach thresholds typically associated with rapid melt. Snow cover at this time contained 0.5 to 1.5 inches of water equivalent (Figure 3), which by itself is generally not considered significant enough to cause widespread flooding. During this warm up, however, snow melt coincided with multiple waves of light rainfall (Figure 4), and runoff was significantly increased due to saturated soils several inches deep within the river basin and some effects of frozen soils near the surface. River gauges upstream of the ice jam indicated rises nearing flood stage in most areas and exceeding flood stage in some areas. The very high runoff ratios were also evidenced by flooding along Forked Creek, a small tributary to the Kankakee that runs through eastern portions of Wilmington. Despite the small basin size, which would typically respond more to high rainfall rates instead of longer-duration periods of light rain and snow melt, multiple roads were closed due to flooding.

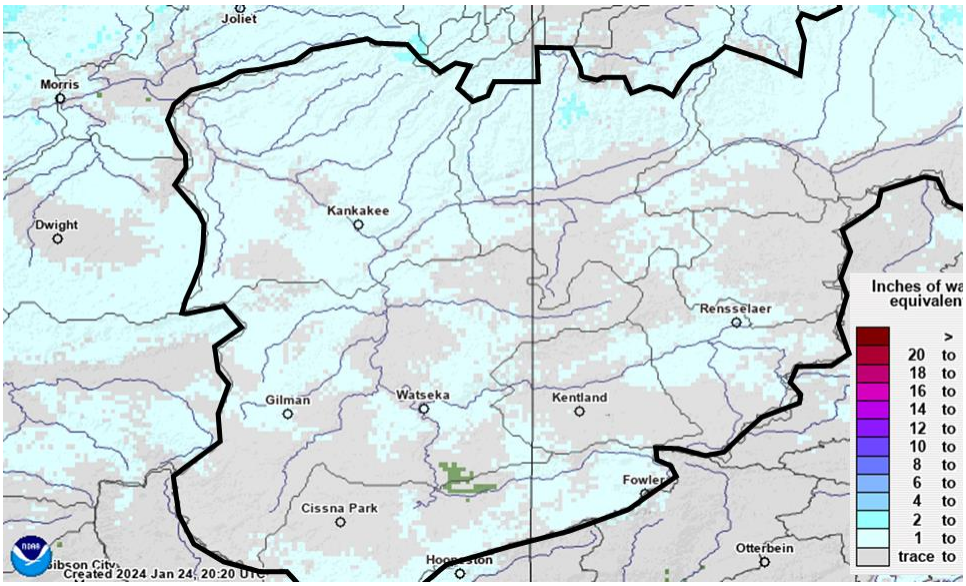

Figure 3. Estimated snow water equivalent valid the morning of January 24, 2024, from NOHRSC. The NOHRSC snow model on this day was including both water in the snow cover from a few days prior and light rainfall from January 21 to January 24, which was assumed to have absorbed into the snow. Most of this snow and rain eventually ended up in area rivers and streams over the next few days. The Kankakee River Basin is indicated with a solid black line.

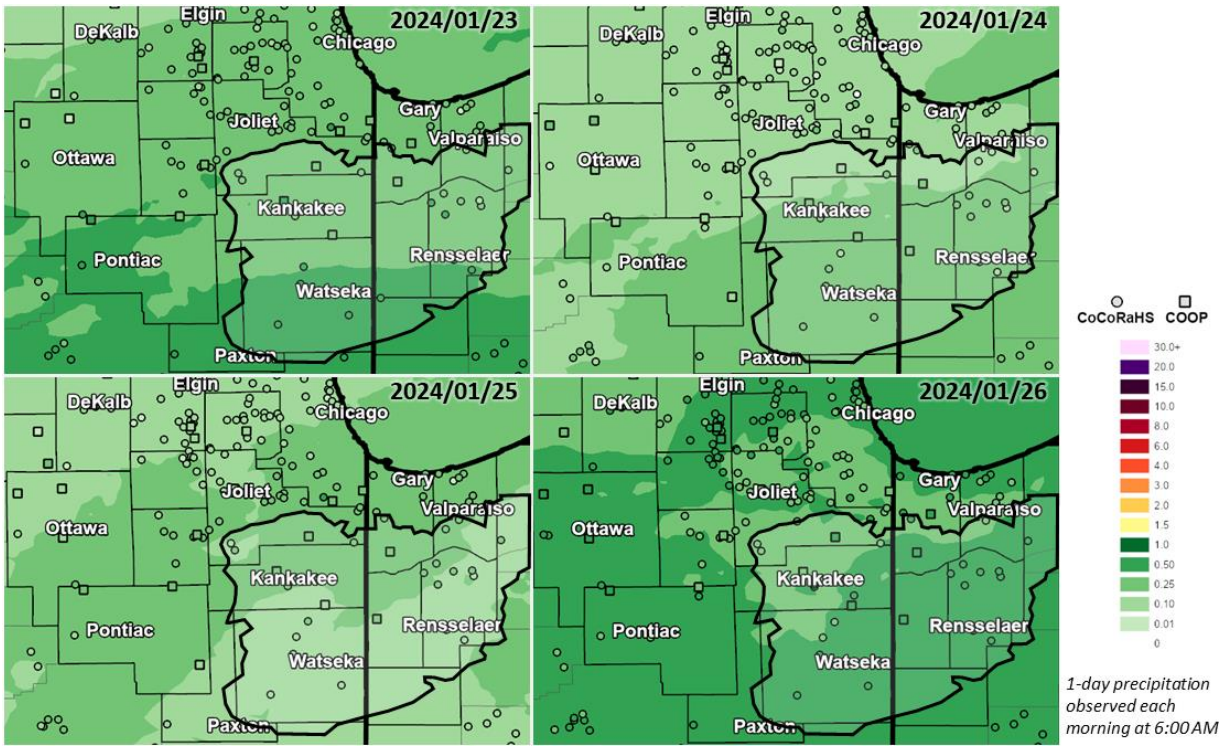

Figure 4. 1-day precipitation observations the mornings of January 23, 24, 25, and 26, 2024. Squares and circles correspond to observations from NWS cooperative observers and CoCoRaHS volunteer observers, respectively. Gridded data corresponds to bias-corrected radar estimates. The Kankakee River Basin is indicated with a dashed line.

3.0 Ice Jam Development

The first indications of a developing ice jam were noted during the late morning hours of January 15 (Figure 5). Gauge data showed a brief climb in water levels at the Wilmington river gauge and reports of overbank flooding were received downstream of the gauge near Bardwell Island and Phelan Acres. By the afternoon of January 15, ice jam extent was estimated at 1-2 miles. Ice jam growth was slow during the next day, with the estimated extent reaching I-55 by the afternoon of January 16 (approximately 3 miles). Ice jam growth accelerated during the evening of January 16 or the subsequent overnight hours, with the extent reaching just upstream of the Wilmington Dam by the morning of January 17 (approximately 9 miles). The upper end of the ice jam was reported at Lakewood Shores on the afternoon of January 19 (approximately 10-mile extent) and at Custer Park on the morning of January 20 (approximately 12-mile extent). The ice jam extent was estimated to have remained generally stable until the morning of January 24, when a slow melt and break-up was noted at the lower end. A more rapid break-up of ice cover, with possibly significant shifting of the ice jam was noted on January 25, which is likely related to the reported rapid-onset flooding of areas near and downstream of Wilmington. Rapid break-up of the ice jam continued into January 26, with the final remaining portions of the jam near I-55 clearing by late evening or the subsequent overnight hours.

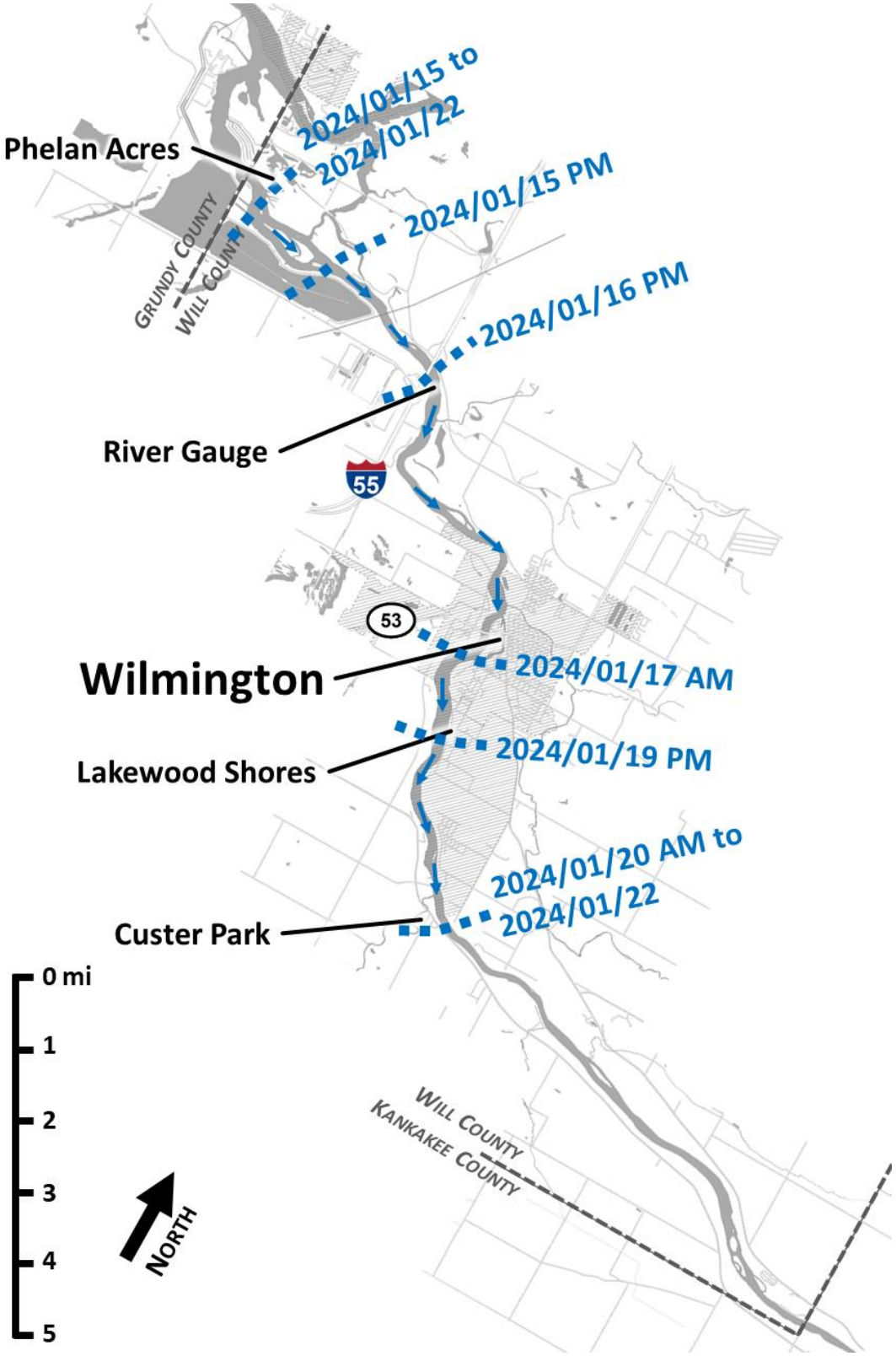

Figure 5. Approximate locations of the ice jam extent during the development phase from January 15 to January 22. Locations estimated based upon a combination of sources, including ice spotter reports, Will County EMA reports, satellite imagery, and river gauge data.

4.0 Flood Impacts

Coincident with ice jam development on January 15, flooding of low-lying areas began near Phelan Acres and areas upstream near I-55. Kelly Road and Phillips Road became impassable and one resident was rescued from a residence that became surrounded by water. By January 16, flooding had slightly expanded in scope and severity as the ice jam slowly grew upriver. Occupants of one vehicle had to be rescued after they became trapped in floodwaters near Phelan Acres. River Road northwest of I-55 became impassable. During the midday hours of January 16, the water level at the Wilmington river gauge began to climb rapidly, with water spilling over the river banks near I-55 into portions of the Des Plaines State Wildlife Area and into yards of residences along Readman Lane. During the overnight hours of January 16 into 17, flooding reached Blodgett Road north of the river near Phelan Acres. During the overnight hours into January 17, the ice jam grew significantly upriver, reaching areas just upstream of the Wilmington Dam by morning. Low-lying portions of Island Park in Wilmington were inundated, which made the main road through the park impassable.

Flood impacts from the ice jam remained generally stable for the next few days, with multiple areas remaining inundated with water and ice, including Island Park in Wilmington, yards along Readman Lane near I-55, roadways in the Des Plaines State Wildlife Area, and roadways and yards near Phelan Acres. The ice cover began to slowly melt and deteriorate on January 23 and 24 due to a combination of warmer weather and usage of the warm water siphon system. Some of the more serious flood impacts related to this ice jam occurred during the break-up phase. As the ice jam melted, ice shifted downstream and re-jammed, possibly on multiple occasions. Late in the evening on January 25, a rapid rise in water level was reported in and near downtown Wilmington. Water was estimated to have risen about 3 feet in just a few hours, worsening ongoing flooding of Island Park inundating new areas. Multiple buildings were evacuated and IL-53 was closed. The roadway at the sound end of Island Park buckled and the guardrail was damaged by moving ice which had piled up against the shore. During the early morning hours of January 26, ice was noted actively piling up against the guardrail on Widows Road downstream of Wilmington, with water levels increasing through the morning hours. By midday, Widows Road was impassable, the Wilmington water treatment plant had portions flooded up to several feet, and one nearby residence was flooded, all while open river conditions had returned to Wilmington just upstream. On the evening of January 26, River Road south of I-55 became impassable and multiple homes on Readman Lane were flooded. Just a few hours later, the ice had cleared at the I-55 bridge and water levels began receding.

Surveys conducted by Will County EMA after the ice jam cleared revealed at least 23 businesses and residences flooded near and downstream of Wilmington. An additional 22 structures may have been flooded, but information was limited. Two more residences had damage to docks and decks. Most structures with flood damage were on Bridge Street and Water Street in Wilmington, and also along Readman Lane downstream of Wilmington, near I-55. As of February 21, flood damages are very approximately estimated at $250,000.

5.0 Ice Jam Mitigation and Break-Up Sequence

As part of the Kankakee River ice management plan, a water siphon is used to pull warm water from the Dresden Station Cooling Pond into the Kankakee River near the railroad bridge west of I-55. The siphon system can slowly warm the temperature of the river and slowly melt ice cover with effectiveness likely affected by river streamflow, river water temperatures, and air temperatures. The amount of water that can be siphoned into the Kankakee River is limited by an Illinois EPA permit and is based upon the cooling pond temperature. A run of the siphon system is limited to a period of time not to exceed 14 days, and only two runs of the system are allowed each winter. On the morning of January 17, one siphon (of three) was activated, which was the limit based upon Dresden Cooling Pond water temperatures. On January 18, Will County and Constellation Energy were granted a deviation request which allowed for the siphon system to be used at capacity (all 3 siphons). When run at capacity, warm water of approximately 60°F was added to the Kankakee River at a rate of about 100 cfs, which had to compete against 32°F water in a river flowing at a rate of about 10,000 cfs.

A small channel of melted water extending approximately 0.5 miles downstream and 100 yards in width was noted in the ice jam the morning of January 19. Satellite imagery collected by Sentinel2 on January 20 showed the areas of melting ice cover (open river) moving downstream (Figure 6). By the morning of January 22, a channel of melted water extended approximately 1.5 miles downstream. The extent of the melted water reached 1.7 miles on the morning of January 23. On January 24, the extent of the melted water reached 1.8 miles in the morning and 2.2 miles in the afternoon, with areas of open water also being noted just downstream of the ice jam near the Will-Grundy county line bridge. By the morning of January 25, a nearly continuous open channel was noted from near the siphon discharge location at the railroad bridge downstream to almost the confluence with the Illinois River, and large pieces of ice were noted flowing down river.

As ice cover was melting along the lower extent of the ice jam, reports also indicated that the ice jam began to melt and shift in the upper reaches. From January 24 to January 26, the upstream extent of the ice jam receded from near Custer Park to near Wilmington (Figure 7). On the morning of January 26, significant ice break up and ice flows were noted at the railroad bridge west of I-55, followed by a progressive break up of the remaining ice jam throughout the afternoon and evening. By the overnight hours into January 27, almost no signs of the ice jam remained on the lower Kankakee River.

Figure 6. Aerial imagery of the lower end of the ice jam on January 20, 2024, captured by the Sentinel2 satellite. Paths of melting ice due to operation of the warm water siphon system are visible extending from near the railroad bridge downstream toward Bardwell Island. Imagery courtesy of Copernicus Sentinel data.

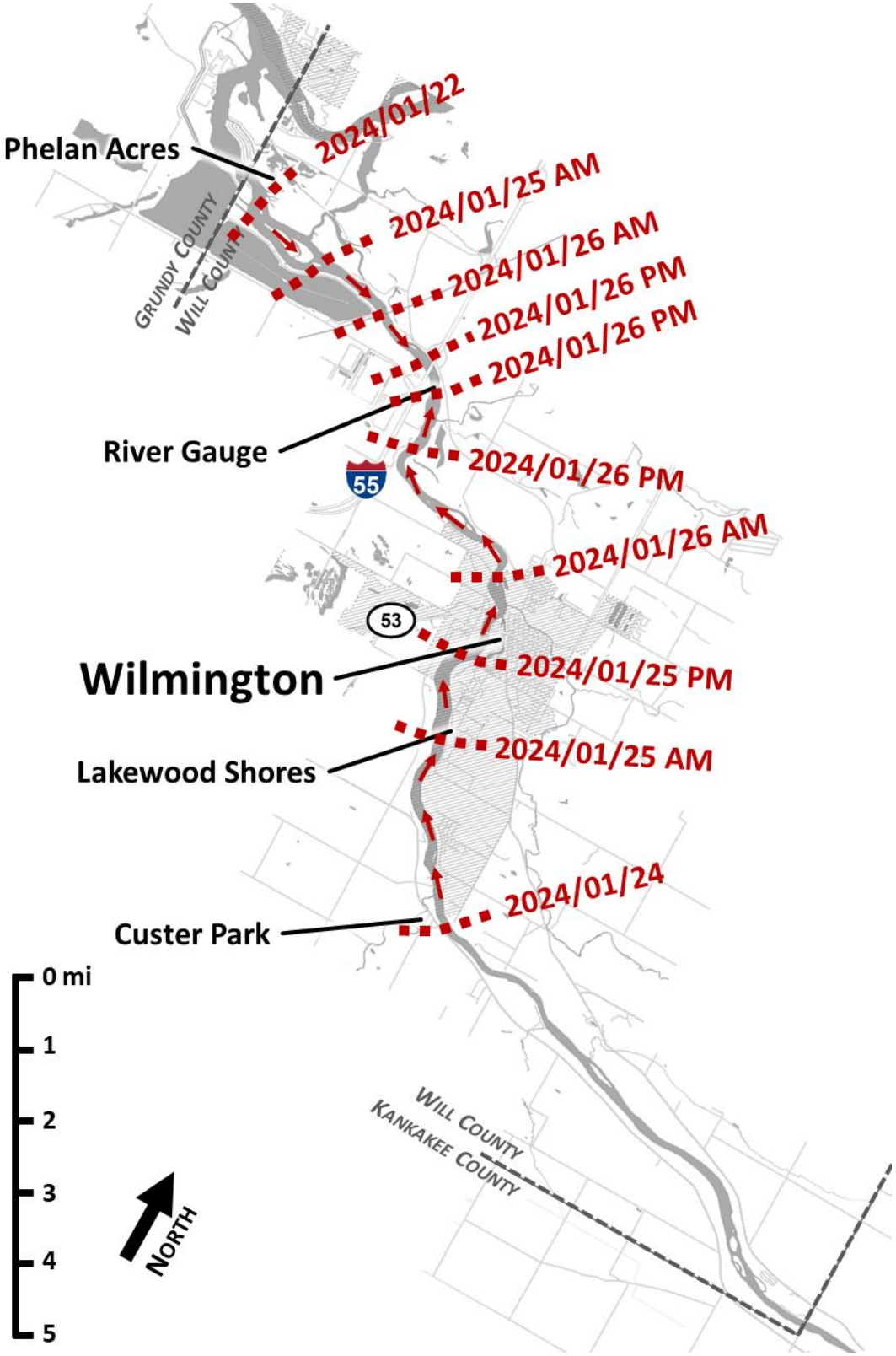

Figure 7. Approximate locations of the ice jam extent during the melt and break-up phase from January 22 to January 26. Locations estimated based upon a combination of sources, including ice spotter reports, Will County EMA reports, and river gauge data.

6.0 National Weather Service Products and Actions

Shortly after the first reports were received of a developing ice jam near Phelan Acres and Bardwell Island on January 15, a Flood Warning was issued for the Kankakee River from Kankakee River State Park downstream to the confluence of the Kankakee with the Illinois River. The warning indicated that flooding was expected to continue until further notice. As the ice jam worsened through the day on January 16 and the Wilmington river gauge climbed to near Major Flood Stage, a Flash Flood Watch was issued for the lower Kankakee River from I-55 downstream to the confluence with the Illinois. The ice jam was artificially increasing water levels on the Kankakee River up to 9 feet (Figure 8), and, because the ice jam was relatively new at the time, it was considered potentially unstable. The Flash Flood Watch remained in effect until January 19, at which point the chance of significant ice shifting was very low due to continued cold weather likely freezing the ice jam in place.

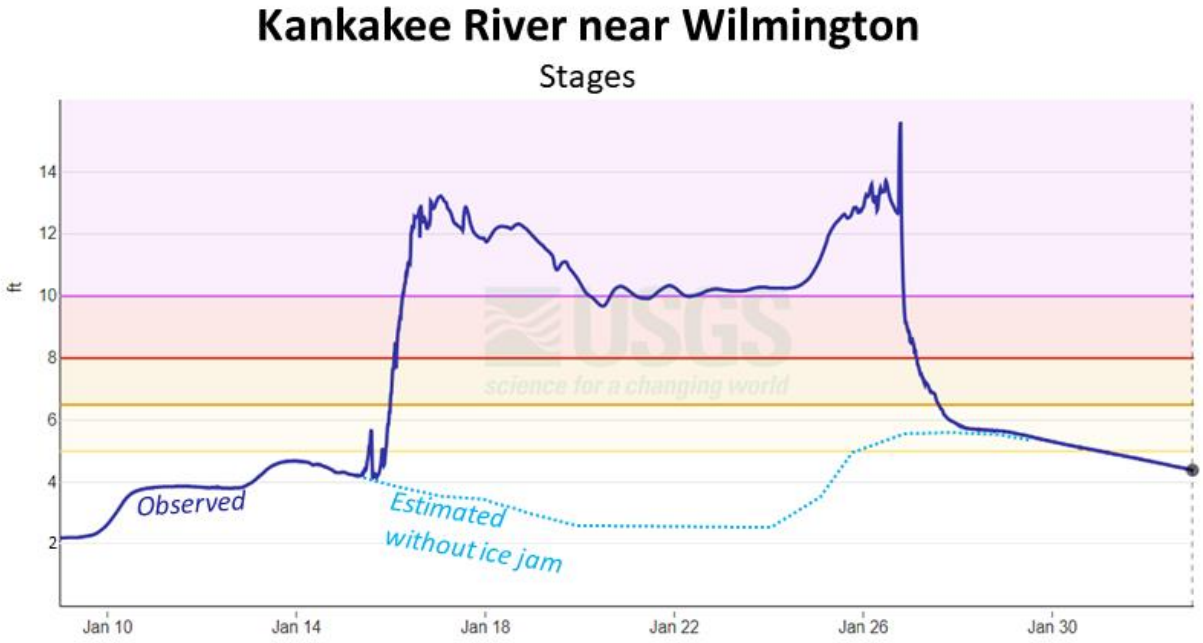

Figure 8. River stages on the Kankakee River near Wilmington during the ice jam of January 2024. The estimated stages that would have occurred without the ice jam are indicated with the dotted line. Stage measurements from the USGS.

On January 23, a Flood Watch was issued for the portions of northeast Illinois and northwest Indiana, including the entire Kankakee River Basin, due to the potential for rain and snowmelt to cause flooding of streams and rivers and to cause shifting of river ice. Local officials were originally briefed that uncertainty still existed on the extent of frozen soils and potential snow melt. It was also unclear how the ice jam would behave even if a significant river rise occurred on the river due to its large size. The

most likely outcome was considered to be a small, within-bank rise on the Kankakee and its tributaries or a rise to near bankfull, but both situations with little impact on the ice jam. On January 24, river gauges upstream of Wilmington indicated quick rises on Kankakee tributaries, which appeared to preclude the small rises scenario. By the morning of January 25, rapid snow melt was reported in the headwaters of the Kankakee, multiple river gauges were nearing bankfull or Minor Flood Stage, and some river ice was already beginning to break up just downstream of the ice jam. Local officials were updated that the potential for breaking and shifting of the ice jam was increasing. A Flash Flood Warning was issued for the Kankakee River from Wilmington downstream to the confluence with the Illinois based upon an assessment made by NWS and local officials that ice jam break up could be imminent. It was also noted that the ice jam could remain in place and rise to near record.

During the early morning hours of January 26, reports were received that a rapid rise in water levels had occurred in Wilmington with evacuations and rescues underway, which caused the Flash Flood Warning to be upgraded to include mention of “considerable” damage potential. Later that morning, local officials were provided an updated assessment indicating that break up of the ice jam likely remained imminent, as evidenced by shifting of river ice near Wilmington and water level fluctuations on the river gauge, with a sudden break up causing a river rise up to 2-4 feet downstream from Wilmington to Phelan Acres. On the evening of January 26, reports were received of new flooding near I-55, with the nearby Wilmington river gauge indicating a steep rise above record stage. Local officials were briefed that a quick rise of up to 3-5 feet could occur downstream. The ice jam was completing the rapid break up phase around this time, and gauge observations indicated a quick drop soon after. The Flash Flood Warning was ended during the early morning hours of January 27, followed by the Flood Warning around midday, and the Flood Watch in the afternoon.

NWS Chicago staff conducted three surveys of the lower Kankakee River during and after the ice jam. The first survey occurred on January 17 shortly after the ice jam rapidly expanded upriver past Wilmington. The second survey occurred on January 30 and covered the Wilmington area and areas just upstream of I-55. A third survey was conducted on February 6 and covered the Des Plaines State Wildlife Area and locations between Wilmington and I-55. During the post-event survey, the primary focus was documenting impacts from flooding and ice, including documentation of potential high water marks. Later during 2024, NWS staff worked with local officials from Will County and Wilmington emergency management to collect additional details of areas impacted by flooding.

7.0 Comparison to Past Ice Jams and Floods

The ice jam of January 2024 joins a long list of river crests at the Wilmington gauge caused by ice jams. Almost all of the highest crests at this location have been caused by ice jams, with the highest "open river" flood event of July 1957 only reaching number 8 since modern records began in the 1930s, with a crest of 11.4 feet. Table 1 provides a listing of the top 10 river crests caused by ice jams at the Wilmington river gauge. If the preliminary crest from January 2024 is verified by the USGS, it will become the new record highest crest since modern records began. It is important to note that due to the localized nature of flooding caused by ice jams, relative magnitudes of the indicated crests cannot be assumed to apply to locations more than a short distance upstream or downstream from the gauge. For example, information collected during the ice jam flooding that impacted Wilmington in February 1982 indicates that water levels were 2-3 feet higher than in January 2024, but the river gauge located 4 miles downstream indicated water levels at least 8 feet lower (the peak recorded water level for the year was 7.1 feet, and did not coincide with the time of the ice jam). If not for the extensive coverage of the January 2024 ice jam, it is possible that Wilmington may have experienced no flooding at all while the river gauge indicated stages above Major Flood Stage. Anecdotal information from a local resident along the Kankakee River approximately 2 miles downstream of Wilmington and approximately 2 miles upstream of the river gauge indicated that the ice jam in January 1968 caused flooding 1.5 feet higher than what was observed in 2024. Little additional information about the 1968 has been found, however.

Table 1. The top 10 river crests caused by ice jams observed by the Wilmington river gauge. The crests from 1883 and 1887 are assumed to be from high water marks and are not part of the modern gauge record; detailed information about how the crests were determined is not available and values should be considered very approximate. Data from USGS, Illinois DNR Office of Water Resources, and NWS records.

Rank	Date	Crest
	1883 (late Jan/early Feb)	16.7 (estimated/preliminary)
	1887 (winter/spring)	16.7 (estimated/preliminary)
1	2024/01/26	15.6
2	1968/01/30	13.9
3	2019/02/05	13.2
4	1985/02/25	12.8
5	1974/01/21	12.8
6	1979/03/08	12.1
7	2008/01/26	12.0 (estimated)
8	1972/12/17	11.8
9	1949/02/01	11.6
10	1950/03/03	11.4

The upstream-downstream extent of the January 2024 ice jam also appeared to be significant compared to other recorded ice jams in recent history, but data is limited. A review of NWS records, satellite imagery, and newspaper articles was conducted to estimate the extent of all known ice jams back to 2007, and major ice jams in the 1980s and 1990s. Based upon this research, it is possible that the 2024 ice jam on the lower Kankakee River was one of the most extensive in the last few decades (Table 2). Because available data on ice jam extent is not comprehensive, and for many events is not available, this information should be used with caution.

A comparison between high water marks and the 1% AEP flood event (estimated by FEMA) illustrated the flood variability occurring along the ice jam. Near and just upstream of I-55, near the start of the ice jam, water levels were several feet above the estimated 1% AEP flood, while water levels near Wilmington were near or below the 1% AEP flood (Figure 9). High water marks collected as part of the NWS survey must be used with caution and in a general sense due to limitations in the equipment and method used. Most high water marks were considered poor quality due to the very subtle mud or debris marks left behind. No survey equipment was used to determine ground elevation; latitude and longitude coordinates were determined using GPS data available to a cell phone and elevations were extracted from LiDAR elevation data for the indicated points.

Table 2. List of ice jams on the lower Kankakee River near Wilmington and I-55 by known upstream-downstream extent. Extent is based upon a measurement of "river miles," following the center of the river channel from start of the ice jam upstream to the end of the ice jam. Remarks: (1) based upon limitations in available data, this may not represent the peak extent of the ice jam, (2) no information found that could be used to estimate ice jam extent, (3) not investigated.

Date	Extent	Extent Description	Sources	Remarks
2024/01	12 mi	Will/Grundy county line to Custer Park	Will County EMA reports; Sentinel2 imagery (2024/01/20)	
2022/02	4 mi	Will/Grundy county line to just upstream of I-55	Sentinel2 imagery (2022/02/04)	(1)
2019/02	7 mi	Illinois confluence to just upstream of I-55	WGN report 2019/02/01; Sentinel2 imagery (2019/01/31)	
2017/01	N/A	Near I-55		(2)
2016/01	N/A	Near I-55		(2)
2015/03	N/A	Near I-55		(2)
2014/02	N/A	Near I-55		(2)
2008/12	>=1 mi	Near I-55	Chicago Tribune article (2008/12/27)	(1)
2008/02	4 mi	Will/Grundy county line to just upstream of I-55	Chicago Tribune articles (2008/01/23, 2008/01/29); Civil Air Patrol imagery (2008/01/25)	(1)
2007/02	N/A	Near I-55		(2)
1990/12	N/A	Near I-55		(2)
1988/02	N/A			(2)
1985/02	>=4 mi	Near I-55 to just downstream of Wilmington	Chicago Tribune article (1985/02/26)	(2)
1984/02	5 mi	Near I-55 to near Wilmington	Chicago Tribune article (1984/02/14)	(1)
1982/02	10 mi	Illinois confluence to near Wilmington *(Chicago Tribune reported a "10-15 mile" extent of ice jam located "north of Wilmington," but river distance between Wilmington and the Illinois River precludes distance longer than 10 miles.)*	Chicago Tribune article (1982/02/24)	
1968/01 or 1968/02	8 mi	Will/Grundy county line to Wilmington Dam	Wilmington Advocate article (1968/02/23) *(Newspaper suggests photos taken closer to publication date, but that appears to be inconsistent with other data from USGS.)*	
All other ice jams prior to 2007	N/A			(3)

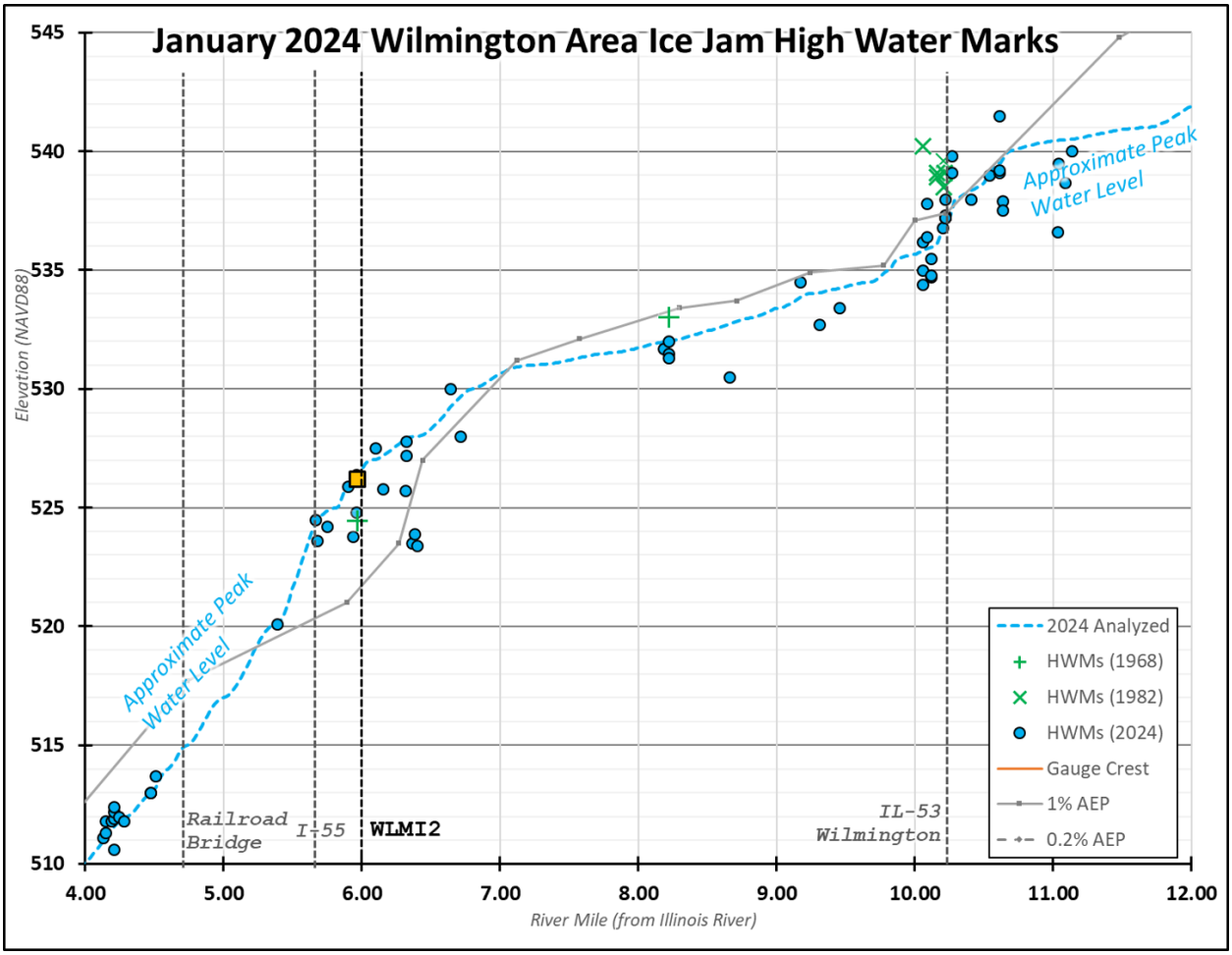

Figure 9. High water marks collected during NWS post-even surveys of the lower Kankakee River. High water marks collected for this report should be considered very approximate due to the equipment and method used to estimate elevation.

During the break-up phase of this ice jam, it was noted that stages recorded by the Wilmington river gauge showed a steep climb followed by a steep fall coincident with ice break up near the gauge location. River stage data from past ice jam events were collected to determine if this behavior was common. Data was aligned such that the time of break up coincided for each event. It was noted that the pre-break-up water level jump also occurred during events in 2022, 2019, 2015, December 2008, and 2007, with the most pronounced instances in 2024 and 2019 (Figure 10). The jump in water levels ranged from 0.9 to 3.0 feet, with an average of 1.5 feet. The ice jams of February 2008 and 2016 broke up very slowly with no sudden jump or fall in water levels. The ice jam of 2017 broke up when river gauge data was unavailable. The exact cause of the sudden jump in water levels prior to many Wilmington area ice jams is not certain, but may be due to shifting of the ice jam during the final break-up phase, with ice shifting downriver multiple times and then re-jamming, with each new instance of jamming corresponding to a localized, rapid jump in water levels. This could explain the sudden jump in

water level observed at three locations in the Wilmington area in 2024 – near the central business district, near the water treatment plant, and near the river gauge – which appeared to occur as the upper end of the jam passed a particular location.

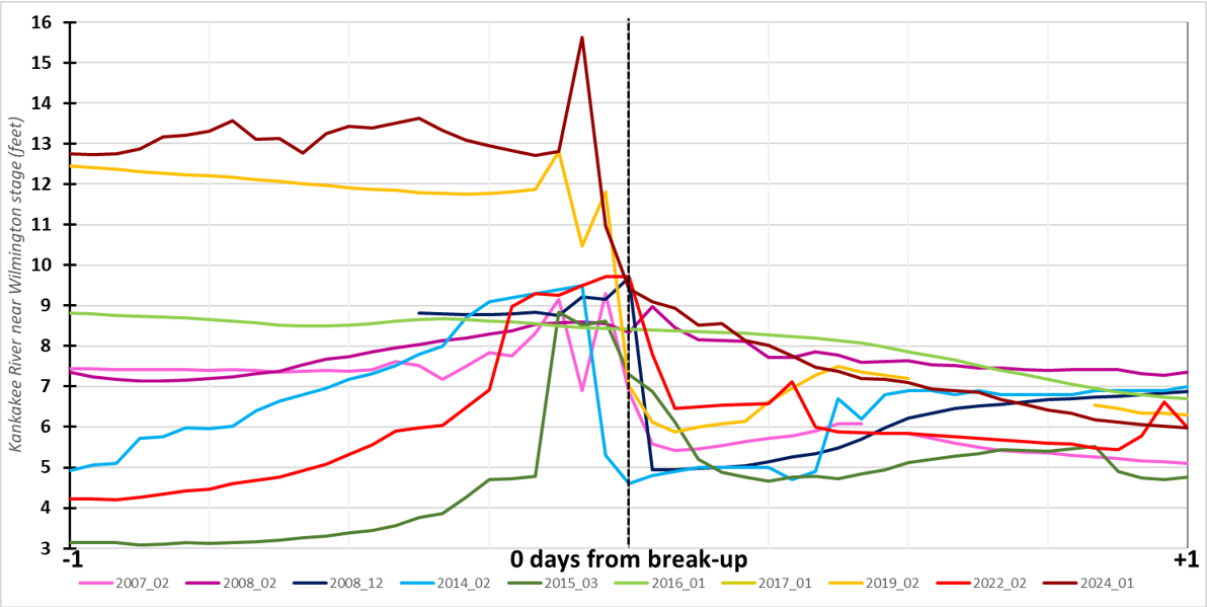

Figure 10. River stages observed by the Wilmington river gauge at the time of ice break up for ice jam events from 2007 to 2024. Note multiple events showing a jump in water levels just prior to ice break-up.

8.0 Estimated Peak Inundation

Using the approximate peak water level determined from high water marks, photo and video evidence, and accounts from local emergency management staff, the peak inundation extent was estimated for the lower Kankakee River from near I-55 to near Wilmington. Due to the equipment and method used to estimate high water mark elevations and the uncertainty associated with anecdotal evidence, the peak flood should be considered approximate. As the ice jam first developed on January 15, flooding occurred near Bardwell Island, downstream of I-55. By January 16, the ice jam had grown upstream to near I-55 and by January 17 the ice jam had grown upstream to near Wilmington. Peak water levels and flood impacts in these areas did not occur until several days later, however, and was associated with shifting ice and break-up ice jams during the ice break-up sequence. During the overnight hours of January 25 into January 26, the peak water level occurred in the Wilmington area. Peak water levels occurred along Widows Road downstream of Wilmington midday on January 26, and near I-55 later than evening.

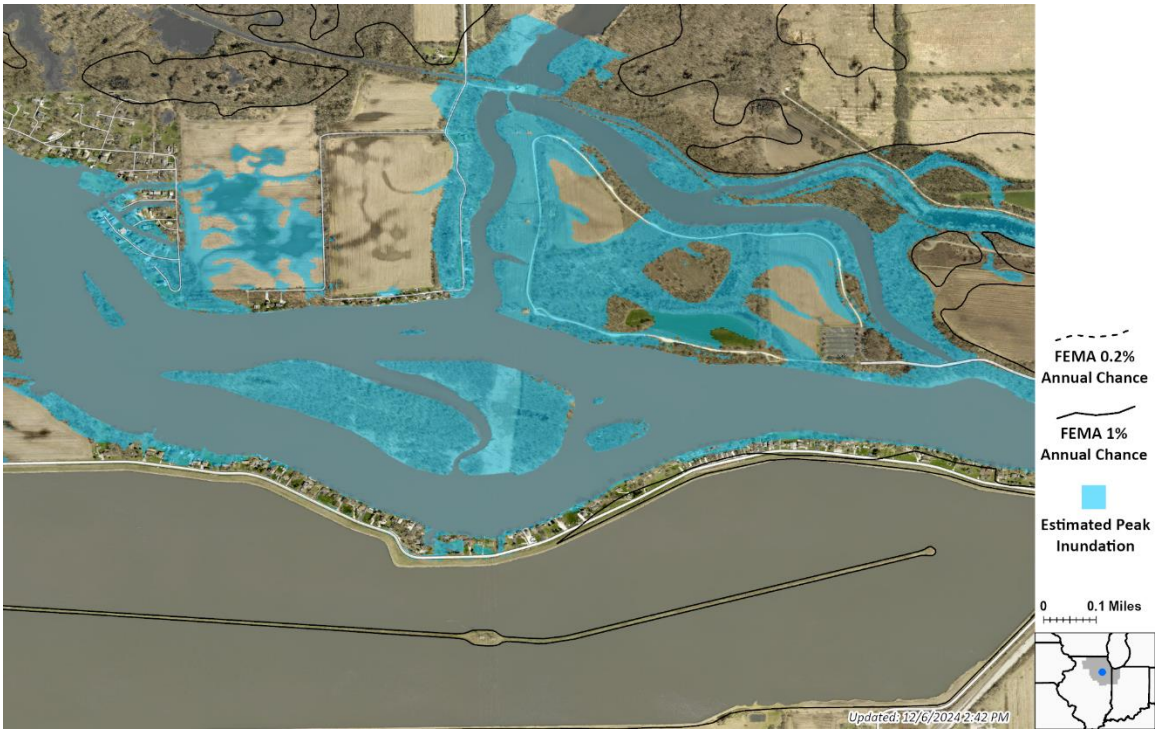

Figure 11. Estimated peak inundation along the lower Kankakee River near Bardwell Island from the ice jam related flooding of mid-January, 2024. The estimated flood extents associated with the 0.2% annual chance and 1% annual chance floods, as published by FEMA, are added as an overlay.

Figure 12. Estimated peak inundation along the lower Kankakee River at Wilmington from the ice jam related flooding of mid-January, 2024. The estimated flood extents associated with the 0.2% annual chance and 1% annual chance floods, as published by FEMA, are added as an overlay.

Figure 13. Estimated peak inundation along the lower Kankakee River just downstream of Wilmington from the ice jam related flooding of mid-January, 2024. The estimated flood extents associated with the 0.2% annual chance and 1% annual chance floods, as published by FEMA, are added as an overlay.

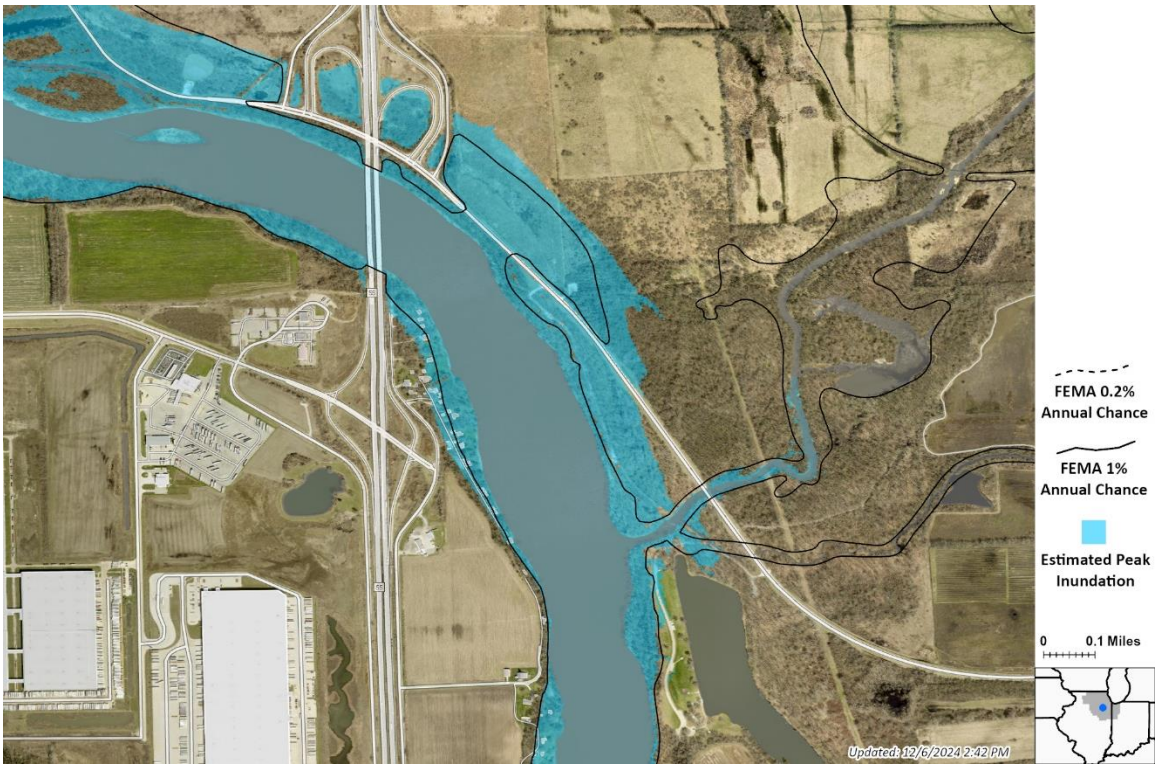

Figure 14. Estimated peak inundation along the lower Kankakee River near I-55 from the ice jam related flooding of mid-January, 2024. The estimated flood extents associated with the 0.2% annual chance and 1% annual chance floods, as published by FEMA, are added as an overlay.

9.0 Conclusions

A significant ice jam occurred on the lower Kankakee River in the general area of I-55 and Wilmington from January 15 to January 26, 2024. The ice jam development phase was generally from January 15 to January 20, and the ice jam break-up phase was generally from January 22 to January 26. At peak extent, the ice jam was estimated to have covered a river reach of approximately 12 miles from near the Will-Grundy county line upstream to near Custer Park. The ice jam break-up phase began slowly, but was followed by a more rapid break up beginning during the overnight hours from January 25 to 26. During final break up, the ice jam shifted multiple times, leading to rapid-onset flooding at several locations, including the Wilmington central business district, the Wilmington water treatment plant, and areas near the river gauge upstream of I-55. If validated by the USGS, the peak stage value at the Wilmington river gauge caused by the January 2024 ice jam will be the highest during the period of modern records.

Selected Post-Event Survey Photos

The following is a selection of photos collected during the two post-event surveys conducted by the National Weather Service on January 30 and February 6. Unless otherwise specified, photo credit is National Weather Service Chicago.

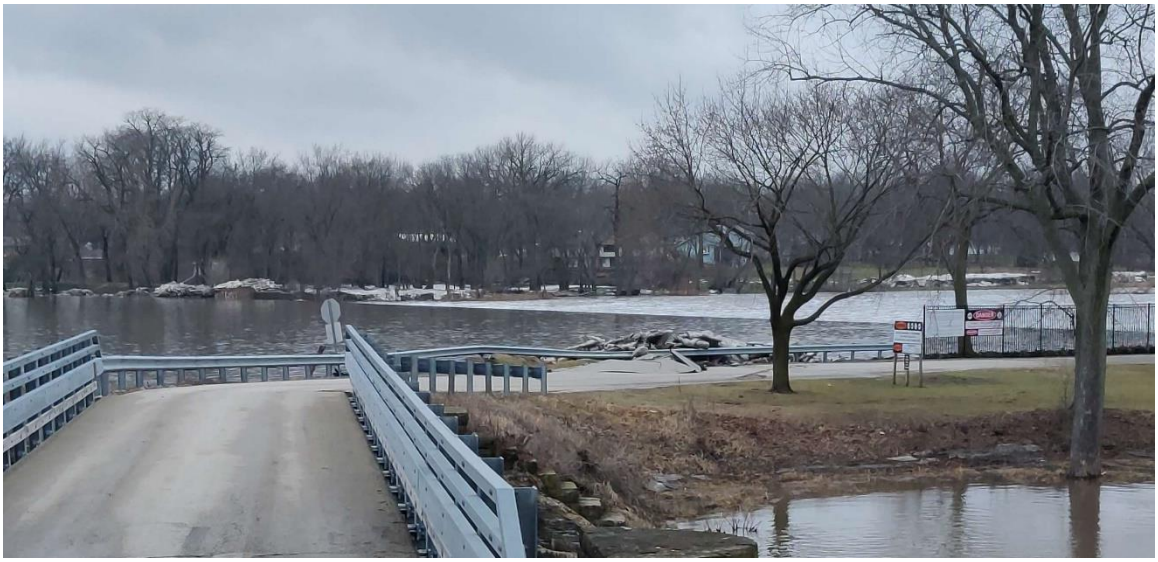

Figure 15. Damage to the roadway through Island Park in Wilmington. Note the piles of ice and shear walls on the opposite river bank still visible on January 30.

Figure 16. Vegetation debris lines on the roadway in Island Park and vegetation stuck in the fence near Wilmington Dam visible on January 30. These high water marks suggest a peak water level of about 539 feet elevation.

Figure 17. Large pieces of ice and flood debris cover portions South Island Park (top) and North Island Park (bottom) in Wilmington on January 30.

Figure 18. Chain link fencing damaged at the north (downstream) end of Island Park in Wilmington due to flooding and ice flows. Photographed on January 30.

Figure 19. Damage to a baseball field at the North Island Park (downstream end) in Wilmington due to flooding and ice flows. Photographed on January 30.

Figure 20. Vegetation stuck in the fence at baseball field at North Island Park (downstream end) in Wilmington. These high water marks suggest a peak water level of about 536 feet elevation. Photographed on January 30.

Figure 21. This photograph, taken by the family of Charles Jeffries of Wilmington, shows damage from an ice jam flood that occurred in late February 1982. This photograph is believed to have been taken from a similar vantage point as the photograph from the post-event survey from 2024, suggesting a water level multiple feet higher in 1982.

Figure 22. Large pieces of ice remain piled against the side of Widows Road near the Wilmington water treatment plant on January 30. During the ice jam break-up phase, water overtopped the road near this location and flooded part of the water treatment plant, suggesting a peak water level of at least 533.5 feet elevation.

Figure 23. Damage marks to a tree and debris marks on a garage approximately 2 miles downstream of Wilmington remain visible on February 6. These high water marks suggest a peak water level of about 531.5 feet elevation.

Figure 24. Multiple trees were damaged by flowing ice near Milliken Lake and the outlet of Prairie Creek. Note the shear walls on the opposite shore still visible on February 6.

Figure 25. Closer view of trees damaged by ice on a small islet near the outlet of Prairie Creek. Photographed on February 14.

Figure 26. Large pieces of ice remain piled against the bank near the Wilmington river gauge and South River Road (top) and against the bank along the northbound I-55 bridge (bottom) on January 30. Photos were slightly adjusted to increase brightness and contrast.

Figure 27. This photo, taken by Erin Ward of Will County EMA, shows an Ice jam in progress just upstream of I-55 at 9:33 AM CST on January 17. Note the web cam attached to the tree in the center of the photo which was installed prior to ice jam formation near the river bank at a height approximately 10 feet above ground level. The stage recorded by the nearby Wilmington river gauge was 12.3 feet at the time of this photo; the river crested over 3 feet higher at approximately 15.6 feet on January 26 and the camera was lost due the resulting ice flow.

Figure 28. Evidence of ice and flowing water remains along South River Road and near the Wilmington river gauge on January 30. Pieces of ice were noted on both sides of South River Road (top), suggesting a peak water level of at least 525 feet elevation, or at least a stage of approximately 14 feet on the Wilmington river gauge. Debris and mud marks were noted on the access road to the river gauge (bottom), suggesting a peak water level of at least 526 feet elevation, or at least a stage of approximately 15 feet. Flood impacts were generally consistent with the peak stage value of 15.6 feet (526.5 feet elevation) recorded by the nearby river gauge.

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