

Excerpt from  
 The Falls City Engineers –  
 A History of the Louisville  
 District, Corps of  
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*Operation ICE SKATE, 1977*

Constant operational emergencies plagued the District during 1976 on the lower Ohio River where four old wicket dams, No. 50 through 53, remained in use. Troubles began on April 27 when a tow accidentally rammed into lock gates at Dam 50. The Louisville Repair Station crew went there, removed the damaged gate, and replaced it with a spare gate kept for that purpose. On August 5, a tow ran over wickets at Dam 52, causing the loss of its pool and blocking the river. To move traffic past the dam, the District's operations division manipulated the dams upstream of Dam 52, storing a pool at each dam and

releasing the extra water in downstream progression to create an artificial wave on which tows could ride past Dam 52. Repairs to Dam 52 had scarcely been completed when another tow rammed the gates there on August 10. Because the last spare lock gate had been installed at Lock 50 in April, the District had to make emergency repairs to the gates at the site while artificial waves moved traffic past until the repairs were completed.<sup>30</sup>

After the difficult summer of 1976, the crew from the repair station returned to Louisville for Christmas holidays and the usual winter "layup" for maintenance of floating plant and tools. On December 27, however, another towboat rammed into lock gates at Lock 51, forcing the District's troubleshooters back on the river for the repairs. The accident closed the lower Ohio for eight days, holding up about seventy waiting tows of coal, petroleum, and rock salt which were desperately needed upriver where extremely cold weather during a fuel shortage had iced highways and the river.<sup>31</sup>

During January and on into February and March of 1977, the entire Louisville District was chilled by temperatures as low as twenty-six degrees below zero and covered by snow up to four feet deep, drifting even higher by winds. For the first time since 1948, the lower Ohio River froze from bank to bank.<sup>32</sup>

Toward the end of January people ice skated on the river, some even crossing it on the ice. Because ice was thin near the center where towboats had broken through, police at Louisville warned people the ice was unsafe but made no arrests. "There's no law against stupidity," commented one policeman. At Cincinnati on January 25, Captain W. A. Boudreaux was ramming the *City of Pittsburgh* upriver through the ice, the first towboat to reach

the Queen City in eight days, when he encountered several hundred pedestrians out for a stroll on the Ohio. As it crunched upstream, it was cracking the ice from bank to bank, and the captain warned the walkers away but they ignored him. Fifty feet from the pedestrians, he stopped the tow and contacted local police. They seemed stymied by the jurisdictional issue, for the river flowed within Kentucky to a point near the Ohio bank, thus being outside of Cincinnati jurisdiction; yet police at Covington, Kentucky, were not sure where the boundary of their city's jurisdiction crossed the river. From the deck of his boat at the Cincinnati waterfront, Captain John Beatty, owner of the salvage firm which handled the chlorine barge at McAlpine in 1972, tried to talk the strollers off the river out of the way of the towboat, but the people refused to leave. One even asked the captain to see his bill of sale for the Ohio River.<sup>33</sup>

As ice thickened, smaller towboats had difficulty breaking through to port. On January 21 and 22, the District lowered wicket dams near Paducah to prevent their destruction by ice, but it also was a time of unusually low river flow and the stage on the lower river, without the dams up and holding pools, soon fell below the minimum nine-foot depth required for barge traffic. The critical need of riverside industries and cities for coal and petroleum forced the District to send lockmen back out on the river in a blizzard on January 27 to raise the wickets, risking loss of the dams to the ice and also lives of the lockmen. To raise a wicket dam, it was necessary for lockmen to work on the river in a maneuverboat, which required the services of a pilot, three deckhands, and a winch operator. Out they went on the ice-choked river during snow and sub-zero temperatures, raising each of the three

hundred wickets at each dam one at a time, working on treacherous footing as spray from the river coated boats, wickets, and men with icy glaze. As wickets came up, narrowing the space through which the river flowed, powerful river currents tried to suck the maneuverboats over the dams and ice floes collected behind the boats, pushing them toward the opening in the dams.<sup>34</sup>

Raising dams on the lower 135 miles of the Ohio where navigation modernization structures had not been completed required three days of hazardous and freezing work. It was accomplished without loss of life or serious injury and the gamble paid off. The pools above the dams rose steadily restoring navigable depths by February 1, and the tows could move once more, provided their towboats were powerful enough to break through the ice.<sup>35</sup>

As traffic began to move, the lockgates at Dam 51 became inoperative. Rocks accumulated on the lockfloor blocked movement of the gates, and Corps diver Randy Noe, wearing all the insulation to be found, went into the frigid water to move the rocks. "It was a bunch of rocks on the gate sill," he remarked on his return to surface after two hours underwater. "Some of them were pretty big. I pushed them out of the way with my hands and feet and shoved them into holes where I knew they wouldn't bother the gate operation again. Man, it was cold! I've been down a lot of times but never before in weather like this."<sup>36</sup>

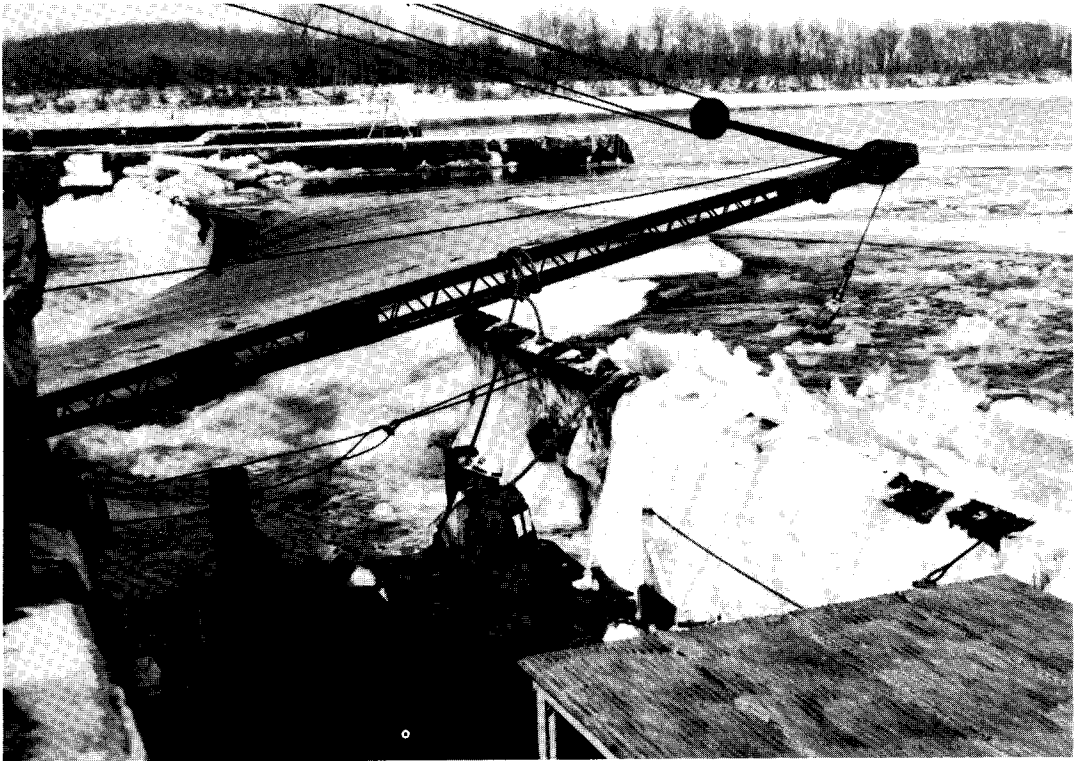
On February 1, the day navigation was restored on the lower Ohio, the District received its first snow removal mission from the federal disaster coordinating agency. It was asked to reopen roads in Indiana blocked by snow drifts up to fifteen feet high. The snow had overwhelmed resources of the state and local highway

departments and had brought normal life in Indiana to a halt; people were running out of heating fuel and delivery trucks could not get through the snow and, for the same reason, grocery shelves were emptying of stock; the sick could not get to hospitals, nor could emergency vehicles travel far.<sup>37</sup>

On February 2 the District sent resident engineers, supply contract experts, and construction inspectors out into the Indiana blizzard as mobile teams, working with state and local highway agencies to award contracts to firms with equipment suitable for road clearance. Often working under oral agreements pending formal contracts, contractors with 134 bulldozers, graders, and other equipment promptly

went to work pushing back the snow. By February 13, ninety-four contracts had been completed and roads in twenty-four Indiana counties were again passable.<sup>38</sup>

Emergency operations on the Ohio had not ended on the first of February, for one crew from Louisville Repair Station continued work downriver repairing wickets at Dam 50 damaged by the ice and another was on duty upstream at Markland Dam, repairing a tainter gate. Most of the remainder of the repair station personnel were called out on February 14 after a small aircraft crashed into the Ohio a short distance upstream of McAlpine Dam. At the request of the Federal Aviation Administration and local police, the Engineer towboat *Patoka* with a whirly crane spent



Crewmen work on the maneuverboat at the ice-covered wickets of Dam 50 on the Ohio, January 22, 1977.

several days fishing through the ice in search of the aircraft, and did pull up enough pieces for positive identification of the plane.<sup>39</sup>

As the ice began to swirl downstream in late February and snow began to melt, the public became worried about the threat of flooding on the order of 1937. Noah Whittle, the District's chief hydrologist, reassured them there was no need for concern. The 1937 flood had been preceded by heavy rains and there had been no heavy rain in late 1976 and early 1977; in fact, drought conditions had prevailed. At the end of the ice skating and snow season, Brigadier General E. R. Heiberg, III, at Ohio River Division dispatched a final situational summary to the Chief of Engineers in which he commented:

We lucked out. The winter of 1976-77 was the coldest ever recorded, and will be remembered for many years. Even though the freeze and subsequent closing of schools and industries had a severe impact on the lifestyle and economy of the area, we did manage to keep our locks and dams operational and mother nature let us off with no disastrous floods.<sup>40</sup>