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Maumee State Forest Tornado – The Year After

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The Devastation

On June 5, 2010 at approximately 11 p.m., a powerful storm produced a tornado which began its path near State Route 109 in southeastern Fulton County and took a northeasterly path approximately 10 miles long – strengthening and weakening as it moved along. Its path included farm fields, woodlots, many rural homes, farmsteads, Oak Openings Metropark, and Maumee State Forest.

In talking with the National Weather Service, the tornado was classified as an EF2 containing winds of 111 – 135 mph. They described the tornado as being cyclic with multi vortexes, and observed that it strengthened and weakened in multiple areas. One of the most eye-opening things was the width of this tornado. Damage on Maumee was up to one-third of a mile wide. Prior to this event, I had often envisioned or seen tornado swaths of twisted trees 100 feet wide, but this was different. This was an irregular swath that widened, narrowed, bobbed, weaved, lifted, landed, and had isolated fingers of damage away from the main path.

When the tornado hit Maumee, it powered through a combination of pine plantations, hardwood plantations, and native oak forest. As you would expect, the hardwood forest areas resisted the tornado much better than the pine. In the main path of the tornado, most trees were either snapped off or uprooted. Only a few native white oak and black oak trees withstood the winds. Maumee has flat terrain with sandy soils ranging from high and dry Ottokee/Spinks fine sand to low and wet Tedrow/Granby soils. The sandy soil allowed many trees to be simply uprooted. Instead of a complete twisted mess, this tornado laid most trees over in a northeasterly direction, with only a few isolated spots where the trees were twisted around.

Assessment of Damage

The initial assessments estimated 300-350 acres of Maumee State Forest to be damaged. The All Purpose Vehicle (APV) and Snowmobile Area, Tree Improvement Area and Windbreak Arboretum all took direct hits. Fortunately, no state forest buildings or facilities were damaged. APV trails, hiking trails, fire lane access roads, and bridle trails had severe blockage in many areas. With the huge amount of woody material blown to the ground, a salvage recovery plan was developed, which was the initial step to reopen

trails and access roads. It was simply too massive and too dangerous of a project to do by hand with chainsaws.

In the weeks that followed, crews from Maumee State Forest, Mohican-Memorial State Forest, and the Ohio Woodlands Job Corps (OWJC) spent considerable time clearing road-side damage, removing hazard trees, and salvaging these logs where possible. They also picked up several truck loads of sheet metal, shingles, miscellaneous boards, and building components deposited from state forest neighbors hit upwind.

Salvage Operations

Plans for salvage harvesting of timber began almost immediately. Division of Forestry staff from Columbus, Findlay, and the southern Ohio forests came up to assist with assessment, mapping, marking, and salvage harvest preparations.

Two separate salvage harvest operations were conducted. The first salvage operation began on July 21, 2010 by T&R Logging from Wellston, Ohio. As encouraged in the Division of Forestry bid prospectus, T&R Logging used low impact cut-to-length logging equipment. They concentrated on removing damaged pine plantations and some areas of low value, small diameter hardwoods. This turned out to be a 195-acre salvage harvest located east and west of County Road 2 in Fulton County as well as areas along State Route 64 in Lucas County. The operation removed 20,769 tons of wood averaging 106 tons per acre. The resulting gross value of this harvest was \$116,861. T&R Logging hauled out 686 semi-truck loads of wood, sending the smaller diameter pine and hardwoods to the Glatfelter Corporation paper mill in Chillicothe, and they hauled larger pine logs to their T&R mill in Wellston. Prior to the tornado, most of these pine plantations were thinned in 2004/2005, with the harvest removal at that time 104-106 tons per acre.

The hardwood salvage began on August 18, 2010 by Wagner Farms and Sawmill of Leipsic, Ohio. This salvage operation was located in a native white, black, and red oak dominated forest on 57 acres east of County Road 2 in the APV area. This salvage harvest was sold on a lump sum bid basis for \$21,060. It was advertised as containing 285,000 board feet of hardwood sawtimber and 1500 tons of hardwood pulpwood. Wagner used a chainsaw and rubber tire skidder operation where they hauled whole trees up to the landing. Once at the landing, the trees were cut and sorted out into either sawlogs or firewood logs and the rest went into a whole-tree chipper. Wagner is a hardwood sawmill, firewood, and mulch business, thus, they were able to utilize all parts of the damaged trees.

The Maumee State Forest and OWJC crews salvaged trees in areas suffering scattered damage totaling 113 acres. These forest areas were either an outlying finger or just off the main path of the tornado. The in-house salvage effort resulted in a total of 458 logs yielding 45,180 board feet and producing \$8,923 of income. This operation was a great opportunity to get the young OWJC members good practical experience in hazard tree removal, log skidding, bucking, grading, scaling, and sale preparation.

After all was said and done, the total area salvaged was 365 acres, or 11 percent of the total acreage of the 3100-acre Maumee State Forest. The tornado also did severe damage to our neighbor, Oak Openings Metropark. They conducted a similar salvage operation.

Although replanting was not necessary due to abundant advanced hardwood tree regeneration, there is an ongoing effort on Maumee to maintain and enhance oak dominated forestland. Being within the Oak Openings Region of northwest Ohio, management efforts are geared toward maintaining this globally-recognized plant and animal community. As in many forests of Ohio, red maple establishment is strong. To encourage oak forests, the OWJC crew gathered acorns to hand-plant 150 acres. Roughly 65,000 acorns and a few walnuts were planted on 10 foot by 10 foot spacing in the salvaged clearcut areas.

By the end of October 2010, the salvage logging operation was complete. At that time, the Maumee crew used dozer and hand crews to clear off woody debris from the remaining closed trails and fire lanes. The Toledo Trail Riders, one of our partnering volunteer groups, assisted on the APV trails by throwing off small woody debris and branches. All of Maumee State Forest was declared open again to public use in November, 2010.

A New Look

The visual landscape of Maumee State Forest has drastically changed. The openness of the County Road 2 and County Road C area and Jeffers Road area has not been felt since they were mainly farm fields in the late 1940s. APV riders found it hard to recognize the trails because of the forest landmarks that were taken down by the tornado. It is hard for many forest users and neighbors to get used to, but they are continually reassured that the forest will grow back very quickly. Forests are very resilient and before you know it, we'll have trees growing in places where we do not appreciate them - like into power lines, roadways, and trails. As evidence of how amazing forests are in Ohio, the spring green-up and warm season growth was incredible in 2011.

Had this tornado taken a path a half mile to the north, it would have struck housing subdivisions and many other rural residential homes, possibly resulting in immeasurable loss of life and property. By taking the path that it did, the tornado took out a renewable forest, creating far less danger to human lives than it could have. For that we can all be thankful.