Water Logged

By Barbara Coyner

Northwest Management Inc., an Idaho-based forest management company, has given “water logged” a whole new meaning, as it pulls water-logged timber from the bottom of western Montana’s Flathead Lake. Once “logged,” the 100-year-old logs are custom milled for paneling, flooring, slabs, and specialty woods for furniture, cabinet, and musical instrument builders.

From Water to Land

The process for salvaging the old-growth logs is anything but routine. No heavy equipment plying the frigid waters of Flathead Lake, no 18-wheelers pulling up to the dock near Somers Bay to haul the load to the mill. The water logging is hands-on all the way.

“It’s a pretty benign process,” says Mark Corrao, product information specialist for Flathead Lake Historic Timber. “At first, we had people fearing this would be a barge-toting industrial operation, and some people were envisioning some version of swamp loggers with trucks backing down public boat ramps. It’s not, and we’ve gained unbelievable public support.”

Corrao, a hydrologist by background and a seasoned diver as well, uses two pontoon boats and four divers. The routine starts out with a reconnaissance of one of the five-acre search areas selected from a divided grid. Because Flathead Lake has various hydrological concerns, Corrao performs several mandatory water quality tests before divers begin to scour the underwater log pile.

Using climbing ropes and carabiners, the divers attach each log to a buoy. Thanks to the almost neutral buoyancy, the logs behave as if they are fairly light, so coaxing them from their 25-foot depth isn’t that difficult. Eventually the logs come to rest between the pontoons where they are cinched more tightly. Using this process, about three logs at a time are hauled in to the boat ramp, where they easily float onto a flatbed trailer and are brought to a staging area. From there, they are scaled and eventually transported to a mill at either Bonners Ferry or St. Ignatius by Jump Trucking of Kalispell.

An average day nets 30 logs, and 997 logs were pulled from the lake between December 2010 and July 2011.

Because Flathead Lake is regarded as a national treasure, Corrao pays strict attention to the water quality issues. He has to. The environmental assessment and environmental impact statement were five years in the making, with the Department of Water Quality and the Montana Department of Natural Resources and Conservation weighing in heavily using strict parameters. That means Corrao must constantly test for 27 sediment and 19 water quality parameters. The fact that there was a previous Superfund site one-quarter mile to the east of Somers Bay plays into the whole scenario in a big way.

Logs Straight out of History

Why are there so many logs under water in the area? That is a history lesson Northwest Management Inc. loves to tell, and the company has a whole write-up, complete with historic photos, on a website at www.consulting-foresters.com/Historic-Timber.
As the West developed and railroads branched out into the timber-laden Northwest, Great Northern Railroad tycoon James Hill and local businessman John O’Brien built an 11-mile short line to a sawmill at the northern end of Flathead Lake.

Between 1901 and 1906, the sawmill cranked out 600,000 railroad ties per year to the railroad. The adjacent settlement of Somers blossomed and by 1910, the Somers Lumber Company was the largest sawmill in the area, providing over 30 million board feet of lumber each year. The mill churned out lumber until 1948, and the DeVoe family continued with the tie treatment process until 1957.

Meanwhile the area also saw some lively log drives, as wannigans hauled crews of 25 men up and down the Flathead River to cut logs that had hung up in the bushes and sand bars during the early spring log-drives. During these annual drives, many trees sank in the rivers and even more sank while being stored in Flathead Lake before the sawmill could retrieve them. In those days, it was easier to cut new timber than recover lost logs, so much of the wood that sank was left behind.

Corrao notes that his company has yet to retrieve any Douglas fir, most likely because those logs were most valued for making ties. Thus far, recovered logs have been 80 percent pine (Ponderosa pine, western white pine, and lodgepole pine) and 20 percent larch, lesser-valued species for railroad ties.

**Keeping Water Clean**

As the Historic Timber group has developed its processes, water quality has remained pivotal, and so far, Corrao says that flows into the lake from the Flathead River are the only sediments showing up in the lake testing so far. That has helped the project keep a favorable reputation with the locals, as well as regulatory agencies.

Once the logs see the light of day, their handling is again a mixture of experimental and tried and true. One challenge was finding a mill to cut the logs into boards. Early in the game, the group sent a batch of logs to portable sawmill operator Duane Gage of Princeton, Idaho. Corrao and the team were amazed at the outcome.

“The logs had 100 percent saturation,” Corrao recounts. “We brought in 28 logs, and they cut like butter, very smooth, with no sand or gravel.”

Five hundred board feet were also sent to the University of Idaho for lab testing, and 157 gallons of water were extracted during kiln drying. A normal tree has 30 to 35 percent moisture and is usually kiln dried down to 15 to 18 percent. Normal drying time is five to six days; however, the waterlogged timber averages nine days for drying one and a quarter inch thick planks.

Once past the milling experiments, not every mill was anxious to take on the cutting due to equipment considerations. Timberland Wood Products of Bonners Ferry and Hunts Timbers Inc. of St. Ignatius do the honors these days, and Kevin Jump continues to do the hauling. Corrao figures the project has enough logs to keep things moving for ten years.

**Unique Logs and High End Products**

The lake-bottom logs have proven to be unusual in their coloration, making them prized among homebuilders, furniture makers, flooring experts, and even musical instrument makers. Boasting a tight grain, the pine is often 15 to 25 rings per
inch, while the larch can have from 40 to 70 rings per inch. As for color, that is generally the main selling point, with pine sporting a virtual rainbow of colors. Chocolate browns, purples, oranges, and pinks create distinctive patterns in the saturated wood, supplying a one-of-a-kind designer look to each board.

Corrao has indulged his furniture crafting fancy by building several demonstration pieces, and the boards have shown up at home shows in the West already. The products are landing on the market in upscale designer niches, proving to be very appealing to log home builders and custom home seekers in Big Sky Country and beyond.

For Corrao and his associates, the unusual logging project has been a definite departure from the norm and another chance to show sensitivity on the environmental front. It is also a demonstration of new methods that can compete with traditional methods.

“The cost is almost the same as if things were being done in the traditional way,” says Corrao. “In this case, increased volume using commercial equipment would be worse for the environment, and cost per salvaged volume would be nearly equal, if not more. As it is, we are using the same equipment people would use in recreation and seeing no impacts to the lake, only beautiful wood.”