

# The WOODland Steward

Promoting the Wise Use of Indiana's Forest Resources

## 2012 Indiana Forest Products Price Report and Trend Analysis

By William L. Hoover and Greg Preston

### Survey Procedures and Response

*This report is intended to be used as an indication of price trends, not for the appraisal of logs or standing timber (stumpage). Data is collected once a year, but log prices are constantly changing. Standard appraisal techniques by those familiar with local market conditions should be used to obtain estimates of current market values for particular stands of timber or lots of logs. Because of the small number of mills reporting logging costs, "stumpage prices" estimated by deducting the average logging and hauling costs from delivered log prices must be interpreted with caution.*

Data for this survey was obtained by a direct mail survey of all known sawmills, veneer mills, concentration yards, loggers, and firms producing wood chips, sawdust, etc., as a byproduct. Only firms operating in Indiana were included. Firms stating that they will not respond are dropped from the mailing list. The survey was conducted by the Indiana Agricultural Statistics Service and analyzed by Prof. Hoover. The prices reported are for logs delivered to the log yards of the reporting mills and concentration yards.

The complete Indiana Forest Products Price Report and Trend Analysis for 1942, 1954-2012 may be found at <https://ag.purdue.edu/fnr/Pages/extforestsprice.aspx>.

Survey procedures were the same as previous years. The questionnaire was mailed to 275 firms. Thirty-two were returned as undeliverable. There was an initial mailing and one reminder postcard sent to non-respondents. At least one call was made to all non-respondents that received the long form. The phone numbers for 23 firms were no longer working. Phone solicitations were made by enumerators of the Indiana Agricultural Statistics Service. Purdue's Department of Forestry and Natural Resources pays for this assistance using funds from its John S. Wright Endowment, not tax-based funds.

Fifty-two mills reported some useful data, compared to 56 in 2011, 62 in 2010, 73 in 2009 and 88 in 2008. Seventeen mills were dropped because their phones were disconnected, or they reported being out of business.

The price statistics by species and grade don't include data from small custom mills, because most do not buy logs, or they pay a set price for all species and grades of pallet-grade logs. They are,

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[www.inwoodlands.org](http://www.inwoodlands.org)

## Calendar of Events

**November 27**  
***Forestlands Workshop***  
Managing Forestlands for  
Wildlife Habitat  
6 PM – 9 PM  
Martinsville  
Free but RSVP to  
info@conservingindiana.org  
or call 317-631-5263 x 118.

**November 30**  
***Forest Pesticide Training Program***  
Greenfield  
Contact lfarlee@purdue.edu  
or 765-494-2153.

**December 4**  
***Forestlands Workshop***  
Private Forestlands for Future  
Generations  
6 PM – 9 PM  
Martinsville  
Free but RSVP to  
info@conservingindiana.org  
or call 317-631-5263 x 118.

**December 11**  
***Forestlands Workshop***  
Productive and Sustainable Forests  
6 PM – 9 PM  
Martinsville  
Free but RSVP to  
info@conservingindiana.org  
or call 317-631-5263 x 118.

**February 6 - 7, 2013**  
***IHLA Convention & Exposition***  
 Indianapolis Marriott Downtown  
 See [www.ihla.org](http://www.ihla.org) or call  
 800-640-4452.

**February 13**  
***Indiana Urban Forest Council***  
***Winter Conference***  
Bloomington  
See <http://iufc.org/index.html>  
for more information.

**Late February through April**  
***Forest Management for the Private Woodland Owner***  
8 weekly evening sessions and  
2 Saturday field  
Location in northern Indiana to be  
determined.  
Contact Ifarlee@purdue.edu  
or 765-494-2153.

**March 1 and 2**  
***Indiana Small Farms Conference***  
Hendricks County Fairgrounds  
Contact [englekin@purdue.edu](mailto:englekin@purdue.edu) or  
260-499-6334 for information

**March 23**  
***Tri-state Woodland and  
Wildlife Workshop***  
Clifty Falls State Park, Madison, IN  
Contact [macgowan@purdue.edu](mailto:macgowan@purdue.edu)

**April 5 - 6**  
***Tree Farm Forest Landowners***  
***Clinic***  
Clifty Inn, Madison  
Contact lfarlee@purdue.edu  
or 765-494-2153.

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*The opinions expressed by the authors do not necessarily reflect those of the Woodland Steward Institute. The objectives of the newsletter are to provide general and technical natural resource information to woodland owners of Indiana, improve information distribution and build support for responsible forest resource management.*

Member Organizations  
Indiana Woodland Steward Institute



## Ask the Steward

*By Dan Ernst*

### Question:

Where do the hornets that build those big paper nests go in the winter time? Can I pick and bring the nest indoors?

**Answer:**

Paper wasps, better known as ‘Baldfaced Hornets’ are actually a species of yellow-jacket. They are easily distinguished from other yellow jackets by their black and white, heavy body about three-quarter of an inch long. The paper nest begins in the spring by a single queen after she has overwintered underground, in a hollow tree or other protected area. Having been fertilized the previous year, she lays eggs and tends to the first batch of larvae, which develop into workers or drones. The workers continue to build the nest from chewed up wood. The football shaped nest sometimes includes colorful cardboard or even paper harvested by workers from different sources. The colony and nest expands and by summer’s end may consist of several hundred wasps. In late fall or early winter the colony shuts down, and fertilized queens leave the nest to overwinter in a protected area. The workers and drones die off and the nest is essentially abandoned, and picked apart by birds and other critters looking for food. While tempting and often done, bringing nests into the home can be a painful stinging experience. There are plenty of stories of abandoned nests coming to life after a good warming up in the house. Some advocate plastic bagging the abandoned nest, and letting it die off for an extended period of time outdoors or in a deep freeze. Let the nest warm, check for

emerging live wasps, before opening the bag.

**Question:**

On a cold, but sunny January day I heard a loud crack in my woods—someone told me it was a tree frost cracking. Is this damaging?

**Answer:**

There is nothing quite like the rifle shot sound of a 'frost crack' echoing through the woods on a warming winter day. This cracking most commonly occurs on cold, but sunny winter days. The warm sun heats the bark and wood directly under the bark causing them to expand. Meanwhile the wood deeper in the tree does not expand at the same rate and POW! The tree splits and frost cracking occurs- or reoccurs. Oddly enough the frost and cold does not initiate the initial tree cracking- this usually originates from an old tree wound or poorly healed branch stub. Once a crack occurs it may open and close several times during the year, or even heal over after many years of callus tissue growth. You may have



noticed this in your woods. A frost crack appears as a long vertical seam—often on the south or southwest side of the tree—sometimes with a raised strip of callus or scar tissue along the seam. These cracks can allow an entry point for wood-decaying fungi, but generally do not require any treatment in a wooded setting.

*Dan Ernst is an Assistant State Forester with the Indiana Division of Forestry. He oversees the state forests in Indiana and has authored the “Ask the Steward” column for years. Have a question for the column? Email Dan at [dernst@dnr.in.gov](mailto:dernst@dnr.in.gov).*



<https://www2.ag.purdue.edu/fnr/GotNature/>

The Department of Forestry and Natural Resources at Purdue University announces a new blog site, "Got Nature?". Find timely information and answers to questions about forestry, wildlife and much more. Readers can also submit questions or topics online.

Recent posts include information about Hellbenders, a “tree doctor” app, epizootic hemorrhagic disease of white-tailed deer, and tree seedlings.



2012 Indiana Forest Products Price Report and Trend Analysis (cont'd from page 1)

Table 1. Prices paid for delivered sawlogs by Indiana sawmills, May 2011 and May 2012.

| Species/<br>Grade | 2012<br>Range<br>(\$/MBF) | No.<br>Responses |      | Mean (standard error) |               | Median |      | Change (%) |        |
|-------------------|---------------------------|------------------|------|-----------------------|---------------|--------|------|------------|--------|
|                   |                           | 2011             | 2012 | 2011                  | 2012          | 2011   | 2012 | Mean       | Median |
|                   |                           |                  |      |                       |               |        |      |            |        |
| White Ash         |                           |                  |      |                       |               |        |      |            |        |
| Prime             | 300 – 600                 | 12               | 17   | 418 / (24.21)         | 457 / (22.87) | 400    | 450  | 9.3        | 12.5   |
| No. 1             | 200 – 550                 | 15               | 19   | 333 / (12.85)         | 371 / (19.59) | 350    | 400  | 11.3       | 14.3   |
| No. 2             | 150 – 400                 | 15               | 19   | 254 / (11.54)         | 283 / (14.49) | 250    | 300  | 11.3       | 20.0   |
| No. 3             | 150 – 250                 | 13               | 13   | 196 / (12.89)         | 215 / (17.54) | 200    | 230  | 9.8        | 20.0   |
| Basswood          |                           |                  |      |                       |               |        |      |            |        |
| Prime             | 240 – 450                 | 8                | 9    | 313 / (24.55)         | 316 / (23.99) | 300    | 300  | 1.0        | 0.0    |
| No. 1             | 200 – 450                 | 9                | 10   | 263 / (17.40)         | 268 / (24.03) | 250    | 245  | 1.8        | -2.0   |
| No. 2             | 150 – 300                 | 9                | 10   | 221 / (16.17)         | 228 / (16.79) | 225    | 240  | 3.4        | 6.7    |
| No. 3             | 100 – 300                 | 9                | 10   | 187 / (15.18)         | 202 / (18.18) | 200    | 200  | 8.2        | 0.0    |
| Beech             |                           |                  |      |                       |               |        |      |            |        |
| Prime             | 240 – 300                 | 8                | 9    | 258 / (16.6)          | 258 / (8.13)  | 250    | 250  | 0.1        | 0.0    |
| No. 1             | 200 – 250                 | 9                | 10   | 228 / (7.60)          | 242 / (6.2)   | 240    | 250  | 6.2        | 4.2    |
| No. 2             | 150 – 250                 | 9                | 10   | 217 / (10.93)         | 227 / (4.8)   | 220    | 240  | 4.8        | 9.1    |
| No. 3             | 150 – 250                 | 9                | 9    | 211 / (10.2)          | 219 / (3.7)   | 200    | 240  | 3.7        | 20.0   |
| Cottonwood        |                           |                  |      |                       |               |        |      |            |        |
| Prime             | 150 – 240                 | 6                | 6    | 190 / (14.14)         | 195 / (12.04) | 200    | 200  | 2.6        | 0.0    |
| No. 1             | 150 – 240                 | 7                | 7    | 191 / (12.04)         | 196 / (2.2)   | 200    | 200  | 2.2        | 0.0    |
| No. 2             | 150 – 240                 | 7                | 7    | 189 / (12.04)         | 196 / (3.8)   | 200    | 200  | 3.8        | 0.0    |
| No. 3             | 150 – 240                 | 7                | 8    | 189 / (12.04)         | 205 / (11.02) | 200    | 200  | 8.7        | 0.0    |
| Cherry            |                           |                  |      |                       |               |        |      |            |        |
| Prime             | 300 – 1100                | 13               | 16   | 782 / (74.28)         | 672 / (50.20) | 750    | 625  | -14.1      | -16.7  |
| No. 1             | 200 – 800                 | 16               | 18   | 613 / (51.94)         | 471 / (31.95) | 550    | 475  | -23.1      | -13.6  |
| No. 2             | 150 – 700                 | 16               | 18   | 373 / (31.38)         | 350 / (27.42) | 325    | 350  | -6.2       | 7.7    |
| No. 3             | 150 – 340                 | 15               | 13   | 211 / (17.04)         | 244 / (15.04) | 200    | 250  | 15.4       | 25.0   |
| Elm               |                           |                  |      |                       |               |        |      |            |        |
| Prime             | 150 – 400                 | 6                | 8    | 210 / (14.61)         | 240 / (25.70) | 210    | 240  | 14.3       | 14.3   |
| No. 1             | 100 – 300                 | 7                | 8    | 214 / (13.07)         | 228 / (15.67) | 220    | 240  | 6.2        | 9.1    |
| No. 2             | 100 – 240                 | 7                | 8    | 211 / (13.88)         | 209 / (10.93) | 220    | 200  | -1.3       | -9.1   |
| No. 3             | 150 – 240                 | 7                | 7    | 211 / (13.88)         | 210 / (12.54) | 220    | 200  | -0.7       | -9.1   |
| Hickory           |                           |                  |      |                       |               |        |      |            |        |
| Prime             | 200 – 750                 | 12               | 16   | 423 / (54.83)         | 401 / (27.79) | 400    | 400  | -5.1       | 0.0    |
| No. 1             | 100 – 750                 | 15               | 18   | 338 / (32.66)         | 340 / (30.34) | 325    | 338  | 0.5        | 3.8    |
| No. 2             | 100 – 450                 | 14               | 15   | 254 / (11.26)         | 273 / (20.73) | 268    | 288  | 7.6        | 7.5    |
| No. 3             | 150 – 450                 | 12               | 12   | 200 / (13.37)         | 256 / (28.16) | 200    | 250  | 27.9       | 25.0   |
| Hard Maple        |                           |                  |      |                       |               |        |      |            |        |
| Prime             | 300 – 1600                | 12               | 17   | 600 / (61.55)         | 668 / (76.57) | 600    | 650  | 11.3       | 8.3    |
| No. 1             | 200 – 1200                | 15               | 17   | 477 / (35.81)         | 494 / (53.01) | 500    | 500  | 3.7        | 0.0    |
| No. 2             | 150 – 550                 | 15               | 17   | 343 / (11.26)         | 341 / (26.99) | 350    | 350  | -0.8       | 0.0    |
| No. 3             | 150 – 300                 | 13               | 13   | 208 / (16.71)         | 228 / (21.47) | 200    | 240  | 9.6        | 20.0   |
| Soft Maple        |                           |                  |      |                       |               |        |      |            |        |
| Prime             | 250 – 550                 | 10               | 14   | 332 / (22.15)         | 368 / (23.79) | 325    | 400  | 10.8       | 23.1   |
| No. 1             | 200 – 550                 | 13               | 15   | 275 / (12.79)         | 303 / (21.68) | 250    | 300  | 10.2       | 20.0   |
| No. 2             | 150 – 400                 | 13               | 14   | 233 / (10.69)         | 248 / (18.19) | 240    | 240  | 6.5        | 0.0    |
| No. 3             | 100 – 300                 | 11               | 13   | 209 / (12.68)         | 240 / (16.15) | 220    | 240  | 2.3        | 9.1    |
| White Oak         |                           |                  |      |                       |               |        |      |            |        |
| Prime             | 350 – 1170                | 13               | 17   | 700 / (50.64)         | 719 / (57.44) | 700    | 700  | 2.7        | 0.0    |
| No. 1             | 250 – 850                 | 17               | 19   | 509 / (31.28)         | 530 / (35.28) | 500    | 500  | 4.2        | 0.0    |
| No. 2             | 150 – 600                 | 17               | 18   | 345 / (18.86)         | 354 / (23.46) | 350    | 350  | 2.5        | 0.0    |
| No. 3             | 150 – 350                 | 14               | 13   | 223 / (20.71)         | 232 / (16.26) | 210    | 240  | 4.2        | 14.3   |
| Red Oak           |                           |                  |      |                       |               |        |      |            |        |
| Prime             | 250 – 700                 | 13               | 17   | 550 / (34.55)         | 547 / (25.17) | 550    | 550  | -0.5       | 0.0    |
| No. 1             | 200 – 650                 | 16               | 19   | 430 / (20.57)         | 424 / (22.47) | 450    | 400  | -1.4       | -11.1  |
| No. 2             | 150 – 450                 | 16               | 19   | 339 / (17.30)         | 317 / (17.52) | 350    | 300  | -6.6       | -14.3  |
| No. 3             | 150 – 350                 | 15               | 13   | 225 / (18.10)         | 225 / (17.34) | 220    | 240  | 0.0        | 9.1    |

however, the primary source of data on the cost of custom sawing and pallet logs. The custom sawing costs reported in Table 3 do not reflect the operating cost of large mills.

Hardwood Lumber Prices

Lumber price changes from January 2009 to July 2012 varied, as always, by species. Perhaps the biggest surprise is that ash prices did not collapse because of increased harvests driven by the emerald ash borer (EAB), but instead prices are increasing. Demand has remained steady in the typical ash markets. An estimated five percent of the ash timber region has been impacted with hardly any in the southern region. At least for now, ash markets are driven by typical factors with anomalies limited to heavily infested areas where log movement is restricted.

Basswood prices remain depressed. They are unlikely to move back up until demand from the fixture sector needs to responds to increased housing starts and remodeling.

Beech continues to follow the pattern of steady prices for 5 to 6 years until a slight price increase sets a new price level that prevails for another 5 or 6 years. End uses of beech lumber are limited to those requiring very tight grain. Price movements for cottonwood are similar. This species is abundant as large defect free logs. This also applies to sycamore, a species that favors the same growing sites as cottonwood.

Black cherry’s return to its traditional ranking behind black walnut continues. Furniture production remains soft awaiting the much anticipated housing recovery. There’s a new reality in this sector as well. Lenders are restricting loans to borrowers with an above average chance of actually covering their loans. This has moved more families into the rental market, driving increases in

Table 1. Prices paid for delivered sawlogs by Indiana sawmills, May 2011 and May 2012. (continued from page 4)

| Species/<br>Grade | 2012<br>Range<br>(\$/MBF) | No.<br>Responses |      | Mean (standard error) |                | Median |      | Change (%) |        |
|-------------------|---------------------------|------------------|------|-----------------------|----------------|--------|------|------------|--------|
|                   |                           | 2011             | 2012 | 2011                  | 2012           | 2011   | 2012 | Mean       | Median |
|                   |                           |                  |      |                       |                |        |      |            |        |
| Black Oak         |                           |                  |      |                       |                |        |      |            |        |
| Prime             | 150 – 700                 | 13               | 16   | 504 / (35.90)         | 503 / (30.44)  | 500    | 500  | -0.1       | 0.0    |
| No. 1             | 150 – 550                 | 15               | 18   | 373 / (20.19)         | 388 / (26.19)  | 350    | 400  | 4.0        | 14.3   |
| No. 2             | 100 – 400                 | 15               | 18   | 283 / (17.28)         | 296 / (19.89)  | 280    | 300  | 4.3        | 7.1    |
| No. 3             | 100 – 350                 | 13               | 13   | 205 / (17.45)         | 221 / (19.06)  | 200    | 240  | 7.5        | 20.0   |
| Tulip Poplar      |                           |                  |      |                       |                |        |      |            |        |
| Prime             | 150 – 500                 | 13               | 16   | 338 / (19.56)         | 381 / (18.73)  | 350    | 400  | 12.8       | 14.3   |
| No. 1             | 100 – 450                 | 16               | 18   | 278 / (14.51)         | 307 / (19.60)  | 275    | 300  | 10.5       | 9.1    |
| No. 2             | 100 – 350                 | 16               | 15   | 219 / (14.21)         | 242 / (17.13)  | 210    | 250  | 10.3       | 19.0   |
| No. 3             | 100 – 250                 | 14               | 13   | 182 / (13.18)         | 202 / (13.81)  | 200    | 200  | 10.6       | 0.0    |
| Sycamore          |                           |                  |      |                       |                |        |      |            |        |
| Prime             | 150 – 300                 | 9                | 9    | 229 / (20.24)         | 241 / (12.96)  | 240    | 250  | 5.3        | 4.2    |
| No. 1             | 100 – 250                 | 10               | 10   | 220 / (14.76)         | 222 / (16.65)  | 230    | 245  | 0.9        | 6.5    |
| No. 2             | 100 – 250                 | 10               | 10   | 215 / (12.41)         | 207 / (15.57)  | 230    | 220  | -3.7       | -4.3   |
| No. 3             | 100 – 250                 | 9                | 9    | 206 / (12.26)         | 202 / (16.56)  | 200    | 200  | -1.6       | 0.0    |
| Sweetgum          |                           |                  |      |                       |                |        |      |            |        |
| Prime             | 150 – 300                 | 8                | 8    | 220 / (22.68)         | 235 / (15.47)  | 210    | 245  | 6.8        | 16.7   |
| No. 1             | 100 – 300                 | 8                | 8    | 205 / (14.27)         | 210 / (22.12)  | 200    | 220  | 2.4        | 10.0   |
| No. 2             | 100 – 250                 | 8                | 7    | 199 / (13.29)         | 211 / (20.29)  | 200    | 240  | 6.4        | 20.0   |
| No. 3             | 100 – 250                 | 8                | 7    | 199 / (13.29)         | 217 / (20.55)  | 200    | 240  | 9.3        | 20.0   |
| Black Walnut      |                           |                  |      |                       |                |        |      |            |        |
| Prime             | 700 – 1800                | 14               | 18   | 1389 / (85.83)        | 1203 / (71.68) | 1450   | 1100 | -13.4      | -24.1  |
| No. 1             | 600 – 1350                | 17               | 19   | 1079 / (61.99)        | 953 / (53.05)  | 1000   | 900  | -11.7      | -10.0  |
| No. 2             | 300 – 1000                | 17               | 18   | 709 / (63.48)         | 708 / (47.36)  | 700    | 800  | -0.1       | 14.3   |
| No. 3             | 100 – 800                 | 15               | 13   | 393 / (67.94)         | 369 / (48.22)  | 350    | 350  | -6.1       | 0.0    |
| Softwood          |                           |                  |      |                       |                |        |      |            |        |
| Pine              | 150 – 250                 | 5                | 4    | 228                   | 203 / (20.56)  | 220    | 205  | -11.2      | -6.8   |
| Red cedar         | 150 – 450                 | 5                | 3    | 347                   | 333 / (92.80)  | 400    | 400  | -3.9       | 0.0    |

Table 2. Prices paid for delivered veneer logs by Indiana mills, May 2011 and May 2012.

| Species/<br>Grade/<br>Log Dia. | 2012<br>Range | No.<br>Responses |      | Mean (standard error) |                  | Median   |      | Change (%) |        |
|--------------------------------|---------------|------------------|------|-----------------------|------------------|----------|------|------------|--------|
|                                |               | 2011             | 2012 | 2011                  | 2012             | 2011     | 2012 | Mean       | Median |
|                                |               | (\$/MBF)         |      | (\$/MBF)              |                  | (\$/MBF) |      |            |        |
| Black Walnut                   |               |                  |      |                       |                  |          |      |            |        |
| Prime                          |               |                  |      |                       |                  |          |      |            |        |
| 12–13                          | 1200 – 5500   | 7                | 5    | 2500 / (189.2)        | 2640 / (777.56)  | 2500     | 2000 | 5.6        | -20.0  |
| 14–15                          | 2000 – 5500   | 9                | 5    | 3346 / (207.11)       | 3240 / (602.16)  | 3200     | 3000 | -3.2       | -6.3   |
| 16–17                          | 2750 – 5500   | 10               | 6    | 4189 / (448.85)       | 3708 / (420.40)  | 3750     | 3500 | -11.5      | -6.7   |
| 18–20                          | 1600 – 5500   | 10               | 7    | 5223 / (540.45)       | 3979 / (524.84)  | 4750     | 4000 | -23.8      | -15.8  |
| 21–23                          | 2750 – 6000   | 10               | 5    | 6145 / (737.82)       | 4950 / (614.41)  | 5500     | 5500 | -19.5      | 0.0    |
| 24–28                          | 2750 – 7000   | 9                | 4    | 6575 / (1027.76)      | 5063 / (880.19)  | 6000     | 5250 | -23.0      | -12.5  |
| >28                            | 2750 – 8000   | 7                | 4    | 6499 / (646.24)       | 5563 / (1081.93) | 7000     | 5750 | -14.4      | -17.9  |
| Select                         |               |                  |      |                       |                  |          |      |            |        |
| 12–13                          | 1000 – 2750   | 4                | 4    | 1738 / (167.55)       | 1488 / (423.47)  | 1750     | 1100 | -14.4      | -37.1  |
| 14–15                          | 1400 – 2750   | 5                | 4    | 2530 / (399.87)       | 1788 / (321.70)  | 2500     | 1500 | -29.3      | -40.0  |
| 16–17                          | 1400 – 2750   | 6                | 4    | 2900 / (365.38)       | 2038 / (343.62)  | 3000     | 2000 | -29.7      | -33.3  |
| 18–20                          | 1600 – 3500   | 6                | 4    | 3775 / (758.70)       | 2413 / (440.82)  | 3750     | 2275 | -36.1      | -39.3  |
| 21–23                          | 1800 – 2750   | 6                | 3    | 4380 / (957.46)       | 2183 / (289.16)  | 4250     | 2000 | -49.3      | -52.9  |
| 24–28                          | 1800 – 2750   | 4                | 3    | 5650 / (1834.17)      | 2350 / (284.31)  | 5250     | 2500 | -58.4      | -52.4  |
| >28                            | 2000 – 2750   | 3                | 3    | 4533 / (1576.21)      | 2417 / (220.48)  | 5000     | 2500 | -46.7      | -50.0  |

multifamily construction in some markets. The impact on furniture and fixture sales is minimal since families driven by foreclosure to apartments aren’t in the market for new furniture.

Hickory prices have been rising this year. Both domestic and international markets are strong. The character marks associated with hickory provide furniture and fixture buyers with a distinctive real wood appearance that is affordable in solid wood pieces.

Demand for white-wood species, including hard and soft maple, is lower and driven by consumer preferences in both domestic and international markets. The declining economic growth rate in China has reduced housing starts, mostly multiunit.

White oak lumber prices remain soft, but up slightly so far this year. Mills serving the quarter- and rift-sawn markets have been kept busy this year by serving high-end markets. Logs destined for these mills can also be sliced for face veneer, providing a higher level of competition in the timber and log markets than for most other species.

Red oak prices

2012 Indiana Forest Products Price Report and Trend Analysis (cont’d from page 5)

Table 2. (continued from page 5)

| Species/<br>Grade/<br>Log Dia. | 2012<br>Range | No.<br>Responses |      | Mean (standard error) |                 | Median   |      | Change (%) |        |
|--------------------------------|---------------|------------------|------|-----------------------|-----------------|----------|------|------------|--------|
|                                |               | 2011             | 2012 | 2011                  | 2012            | 2011     | 2012 | Mean       | Median |
|                                |               | (\$/MBF)         |      | (\$/MBF)              |                 | (\$/MBF) |      |            |        |
| White Oak                      |               |                  |      |                       |                 |          |      |            |        |
| Prime                          |               |                  |      |                       |                 |          |      |            |        |
| 13–14                          | 1150 – 2400   | 8                | 2    | 1262 / (118.15)       | 1775 / (625.00) | 1225     | 1775 | 40.6       | 44.9   |
| 15–17                          | 1400 – 2400   | 8                | 3    | 1638 / (150.31)       | 1933 / (290.59) | 1775     | 2000 | 18.1       | 12.7   |
| 18–20                          | 1400 – 2400   | 8                | 4    | 2096 / (177.70)       | 1950 / (206.16) | 2200     | 2000 | -7.0       | -9.1   |
| 21–23                          | 2400 – 2500   | 8                | 3    | 2604 / (112.02)       | 2467 / (33.33)  | 2590     | 2500 | -5.3       | -3.5   |
| 24–28                          | 2400 – 2750   | 8                | 3    | 3067 / (144.94)       | 2633 / (116.67) | 3000     | 2750 | -14.1      | -8.3   |
| >28                            | 2400 – 3000   | 7                | 3    | 3290 / (238.23)       | 2800 / (200.00) | 3500     | 3000 | -14.9      | -14.3  |
| Select                         |               |                  |      |                       |                 |          |      |            |        |
| 13–14                          | 500           | 3                | 1    | 1017 / (216.67)       | 500             | 1000     | 500  | -50.8      | -50.0  |
| 15–17                          | 750 – 1000    | 3                | 2    | 1167 / (260.34)       | 875 / (125.00)  | 1200     | 875  | -25.00     | -27.1  |
| 18–20                          | 750 – 1000    | 3                | 2    | 1533 / (266.67)       | 875 / (125.00)  | 1800     | 875  | -42.9      | -51.4  |
| 21–23                          | 1000          | 3                | 2    | 1833 / (440.96)       | 1000            | 2000     | 1000 | -45.5      | -50.0  |
| 24–28                          | 1000          | 3                | 2    | 2267 / (635.96)       | 1000            | 2800     | 1000 | -55.9      | -64.3  |
| >28                            | 1000          | 2                | 2    | 2250 / (1250.00)      | 1000            | 2250     | 1000 | -55.6      | -55.6  |
| Black Cherry                   |               |                  |      |                       |                 |          |      |            |        |
| Prime                          |               |                  |      |                       |                 |          |      |            |        |
| 12–13                          | NA            | 2                | 0    | 1100 / (100.00)       | NA              | 1100     | NA   | NA         | NA     |
| 14–15                          | 2000 – 3500   | 6                | 3    | 2292 / (417.62)       | 2500 / (500)    | 1900     | 2000 | 9.1        | 5.3    |
| 16–17                          | 2000 – 3500   | 7                | 4    | 2550 / (390.51)       | 2563 / (359.04) | 2000     | 2375 | 0.5        | 18.8   |
| 18–20                          | 2100 – 3500   | 7                | 4    | 3100 / (603.96)       | 2650 / (315.57) | 2500     | 2500 | -14.5      | 0.0    |
| 21–23                          | 2250 – 3500   | 7                | 4    | 3586 / (704.55)       | 2750 / (270.03) | 3000     | 2625 | -23.3      | -12.5  |
| 24–28                          | 2250 – 3500   | 5                | 4    | 4500 / (974.68)       | 2750 / (270.03) | 4000     | 2625 | -38.9      | -34.4  |
| >28                            | 2400 – 3500   | 4                | 4    | 3875 / (657.49)       | 2788 / (248.64) | 4000     | 2625 | -28.1      | -34.4  |
| Select                         |               |                  |      |                       |                 |          |      |            |        |
| 12–13                          | 600           | 1                | 1    | 800                   | 600             | 800      | 600  | -25.0      | -25.0  |
| 14–15                          | 600 – 1000    | 3                | 2    | 1817 / (841.79)       | 800 / (200.0)   | 1000     | 800  | -56.0      | -20.0  |
| 16–17                          | 600 – 2750    | 3                | 3    | 2033 / (883.80)       | 1483 / (649.57) | 1200     | 1100 | -27.0      | -8.3   |
| 18–20                          | 600 – 2750    | 3                | 3    | 2883 / (1331.14)      | 1517 / (640.53) | 2000     | 1200 | -47.4      | -40.0  |
| 21–23                          | 1000 – 2750   | 3                | 3    | 3300 / (1497.78)      | 1650 / (553.02) | 2500     | 1200 | -50.0      | -52.0  |
| 24–28                          | 1000 – 2750   | 2                | 3    | 2375 / (1125.00)      | 1650 / (553.02) | 2375     | 1200 | -30.5      | -49.5  |
| >28                            | 1000 – 2750   | 2                | 3    | 2875 / (1625.00)      | 1650 / (553.02) | 2875     | 1200 | -42.6      | -58.3  |
| Red Oak                        |               |                  |      |                       |                 |          |      |            |        |
| Prime                          |               |                  |      |                       |                 |          |      |            |        |
| 16–17                          | 550 – 1250    | 8                | 4    | 1166 / (98.11)        | 925 / (145.06)  | 1100     | 950  | -20.7      | -13.6  |
| 18–20                          | 800 – 1250    | 7                | 4    | 1292 / (112.08)       | 988 / (96.56)   | 1200     | 950  | -23.5      | -20.8  |
| 21–23                          | 850 – 1250    | 7                | 4    | 1401 / (126.29)       | 1000 / (88.98)  | 1500     | 950  | -28.6      | -36.7  |
| 24–28                          | 900 – 1250    | 7                | 3    | 1450 / (146.35)       | 1050 / (104.08) | 1500     | 1000 | -27.6      | -33.3  |
| >28                            | 900 – 1250    | 5                | 3    | 1466 / (157.30)       | 1050 / (104.08) | 1500     | 1000 | -28.4      | -33.3  |
| Select                         |               |                  |      |                       |                 |          |      |            |        |
| 16–17                          | 550 – 900     | 3                | 3    | 967 / (33.33)         | 700 / (104.08)  | 1000     | 650  | -27.6      | -35.0  |
| 18–20                          | 650 – 900     | 3                | 3    | 1033 / (88.19)        | 733 / (83.33)   | 1000     | 650  | -29.0      | -35.0  |
| 21–23                          | 650 – 900     | 3                | 2    | 1133 / (185.59)       | 775 / (125.00)  | 1000     | 775  | -31.6      | -22.5  |
| 24–28                          | 650 – 900     | 3                | 2    | 1233 / (284.80)       | 775 / (125.00)  | 1000     | 775  | -37.2      | -22.5  |
| >28                            | 650 – 900     | 2                | 2    | 1400 / (400.00)       | 775 / (125.00)  | 1400     | 775  | -44.6      | -44.6  |
| Hard Maple                     |               |                  |      |                       |                 |          |      |            |        |
| Prime                          |               |                  |      |                       |                 |          |      |            |        |
| 16–20                          | 1400 – 2000   | 7                | 4    | 1854 / (182.89)       | 1850 / (150.00) | 2000     | 2000 | -0.2       | 0.0    |
| >20                            | 1400 – 2000   | 6                | 3    | 1925 / (294.32)       | 1800 / (200.00) | 2000     | 2000 | -6.5       | 0.0    |
| Select                         |               |                  |      |                       |                 |          |      |            |        |
| 16–20                          | 950 – 1400    | 2                | 3    | 1500 / (500.00)       | 1117 / (142.40) | 1500     | 1000 | -25.6      | -33.3  |
| >20                            | 950 – 1400    | 2                | 2    | 1750 / (750.00)       | 1175 / (225.00) | 1750     | 1175 | -32.9      | -32.9  |
| Yellow Poplar                  |               |                  |      |                       |                 |          |      |            |        |
| Prime                          |               |                  |      |                       |                 |          |      |            |        |
| 16–20                          | 400 – 500     | 4                | 2    | 575 / (85.39)         | 450 / (50.00)   | 550      | 450  | -21.7      | -18.2  |
| >20                            | 400 – 500     | 4                | 2    | 600 / (81.65)         | 450 / (50.00)   | 600      | 450  | -25.0      | -25.0  |
| Select                         |               |                  |      |                       |                 |          |      |            |        |
| 16–20                          | 350 – 500     | 1                | 2    | 400                   | 425 / (75.00)   | 400      | 425  | 6.3        | 6.3    |
| >20                            | 350 – 500     | 1                | 2    | 600                   | 425 / (75.00)   | 600      | 425  | -29.2      | -29.2  |

Sawlog Prices

The number of mills reporting sawlog prices was up slightly this year (Table 1). Changes varied by species with median prices showing less change than average price. This is because one out-of-range price changes the mean price more than the median price.

Consistent with price increases for ash lumber, log prices were up for all grades, 20 percent for No. 2’s. Basswood prices were essentially unchanged, as were beech and cottonwood.

Lower black cherry lumber prices are reflected in 15 to 20 percent declines in log prices. The lowest quality, No. 3’s, were up substantially. The log cost to lumber yield ratio remains sufficient for mills to process these logs.

The two upper grades of elm logs were up, likely reflecting their use for pallet lumber and blocking. Hickory prices varied greatly with increases for No. 2 logs.

Prices paid for the higher grade maple logs, hard and soft, increased. This is surprising given declines in lumber prices.

White oak prices were up slightly, most likely based on the availability of high grade logs for quarter-sawn and rift-cut lumber. As noted above, another factor is competition with white oak timber and log buyers for veneer mills. The decline in red oak lumber prices is reflected in log prices, down by as much as 14 percent. Black oak, a “substitute,” for red oak, showed price increases. Red oak lumber prices refer to lumber from any of the species in the red oak family. The lower cost for black oak logs makes them competitive even with lower yields of No. 1C and better lumber.

Tulip poplar log prices were up substantially. Sawmills are return to this species as demand increases. Good stands of this species are common in southern

Table 3. Prices of miscellaneous products reported by Indiana mills, May 2011 and May 2012, free on board (fob) the producing mill

|                     | No.<br>Responses | 2012<br>Range | Mean |      | Median |      |
|---------------------|------------------|---------------|------|------|--------|------|
|                     |                  |               | 2011 | 2012 | 2011   | 2012 |
| Pallet logs, \$/MBF | 24               | 140 – 340     | 250  | 236  | 250    | 240  |
| Pallet logs, \$/ton | 6                | 10 – 38       | 32   | 29   | 34     | 34   |
| Sawn cants          | 1                | 320           | 310  | 320  | 310    | 320  |
| Pulpwood, \$/ton    | 1                | 35            | 30   | 35   | 30     | 35   |
| Pulp chips, \$/ton  | 12               | 5.5 – 32.1    | 27   | 22   | 28     | 22   |
| Sawdust, \$/ton     | 5                | 3.43 – 15     | 12   | 10   | 9      | 10   |
| Sawdust, \$/cu. yd. | 13               | 3 – 10        | 5    | 5    | 4.38   | 5    |
| Bark, \$/ton        | 5                | 5 – 20        | 10   | 12   | 8.5    | 12   |
| Bark, \$/cu. yd.    | 12               | 3 – 18        | 7    | 9    | 4.6    | 7    |
| Mixed, \$/ton       | 0                |               | 12   |      | 12     |      |
| Mixed, \$/cu. yd.   | 0                |               |      |      |        |      |

Indiana. Sycamore and black gum prices were generally down.

Black walnut log prices were down substantially, even median prices. The decline in log prices matched those for lumber, averaging about 15 percent in both cases. The median price of Prime logs was down almost 25 percent.

Veneer Log Prices

The number of mills reporting veneer log prices declined further this year. One more mill was added to the list of those doing only custom cutting. This refers to mills that do not take ownership of logs, but process those of other firms. In many cases these other firms are buying logs to convert to veneer to be exported.

Veneer log prices (Table 2) were down for all the species, and by more than 50 percent for some species-grade-size categories. The declines hit even the smaller sizes of lower grade, select logs. This indicates that the demand for veneer was not strong enough to justify substituting these lower cost logs for larger higher grade logs. Small lower grade logs require more handling per square foot of veneer produced. The veneer from such logs is usually trimmed for sale to producers of panels used in furniture construction.

Miscellaneous Products

Prices of the logs purchased at a bulk price decreased (Table 3). These are logs sawn or chipped into cants, and resawn into boards used for pallets or blocking, railroad ties, or other industrial applications. Pallet lumber logs decreased by \$14 per MBF and \$3 per ton. Prices received for by-products, such as sawdust and bark, were

also down. Bark sold by the cubic yard was an exception. This price increased by \$2 per yard.

Custom Costs

A large number of owners of small portable mills continue to saw logs brought to them. This practice harkens back to pioneer days when every county had a couple of mills that sawed logs into lumber needed by the log owners. Today they charge a fee per MBF or per hour. The cost for this service increased by about \$25 per MBF. Logging costs increased significantly. The mean went from \$96 to \$163 per MBF. The number of firms reporting this cost increased significantly compared to previous years, making the 2011 cost

estimate suspect. The logging cost increase is due in part to a decline in the number of loggers during the recession.

Indiana Timber Price Index

The delivered log prices collected in the Indiana Forest Products Price Survey are used to calculate the delivered log value of typical stands of timber. This provides trend-line information that can be used to monitor long-term prices for timber. The species and log quality weights used to calculate the index are described in previous editions of this report, available at <https://ag.purdue.edu/fnr/Pages/extforestsprice.aspx>. The weights are based primarily on the 1967 Forest Survey of Indiana. Adjusting the weights for more recent forest surveys did not change the series enough to justify converting to a new series.

The nominal (not deflated) price is a weighted average of the delivered log prices reported in the price survey. The price indexes are the series of nominal prices divided by the price in 1957, the base year, multiplied by 100. Thus, the index is the percentage of the 1957 price. For example, the average price in 2012 for the average stand was 687.3 percent of the 1957 price. This index for a quality stand decreased from 826.6 percent to 739.9 percent.

The real prices are the nominal prices deflated by the producer price index for finished goods, with 1982 as the base year. The real price series represents the purchasing power of dollars based on a 1982 market basket of finished producer goods. It’s this real price trend that is important for evaluating long-term investments like timber and the



2012 Indiana Forest Products Price Report and Trend Analysis (cont'd from page 7)

log input cost of mills. Receiving a rate of return less than the inflation rate means that the timber owner is losing purchasing power, a negative real rate of return.

Note that each year the previous year's number is recalculated using the producer price index for finished goods for the entire year. The price index used for the current year is the last one reported for the month when the analysis is conducted: July this year. The inflation rate increased by 1.36 percent from 2011 to June of this year.

### Average Stand

The nominal weighted average price for a stand of average quality decreased from \$388.5 per MBF in 2011 to \$382.2 this year (Figure 1). This is a 1.62 percent decrease, continuing the downward trend. Remember that this series is based on delivered log prices, not stumpage prices.

The deflated, or real, price decreased from \$199.2 in 2011 to \$197.9, a 0.6 percent decrease. This continues the trend since 2004 of dropping further below the historical trend line.

The new equation for the trend line for the 1957 to 2012 period is,

$$\text{Avg. Stand Real Price} = 182.42 + 1.73 \cdot T, \text{ where, } T=1 \text{ for } 1957, 2 \text{ for } 1958 \dots 56 \text{ for } 2012$$

We usually say that this linear trend line should be used to project real prices of a commodity like hardwood logs. The slope of this trend line depends on the starting point. The year 1957 is used simply because this is the first year data was available. A better year might be 1972, the start of the first large price cycle. Doing so reduces the slope of this trend line to \$0.90, i.e. next year's trend-line price is this much higher than the previous year. The average annual compound rate of increase from 1972 to 2012 based on this trend line is 0.37 percent. This means that the real rate of return from holding such a stand over the 41 years would be 0.37 percent. Most investors seek a real rate of return of at least 1 percent. The increase for the trend line starting in 1957 is 0.76 percent.

### Quality Stand

The nominal weighted average price for a high-quality stand decreased from \$550.41 last year to \$492.70 this year (Figure 2). This is a 10.48 percent decrease. The average real price series for a high-quality stand decreased from \$288.9 per MBF last year to \$255.1 this year. This is an 11.69 percent decrease.

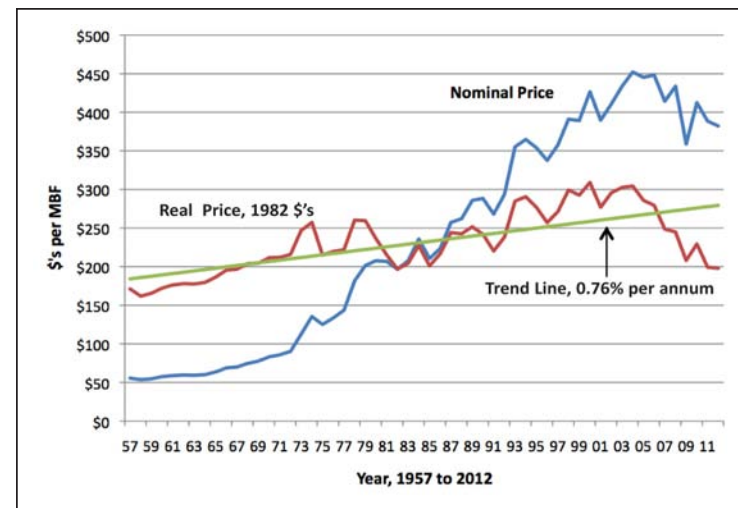


Figure 1. Average stand of timber: nominal, deflated, and trend-line price series, 1957-2012.

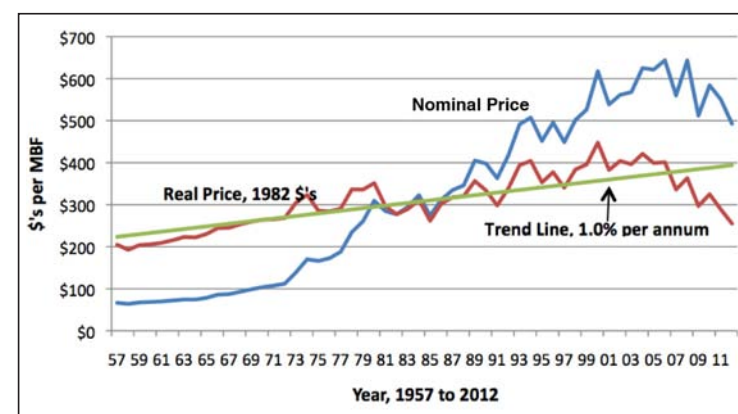


Figure 2. Quality stand of timber: nominal, deflated, and trend-line price series 1957-2012.

The average annual compound rate of increase for the trend line declined from 1.11 percent last year to 1.02 percent this year. The equation for the trend line is,

$$\text{Quality Stand Real Price} = 220.55 + 3.10 \cdot T, \text{ where } T=1 \text{ for } 1957, 2 \text{ for } 1958 \dots 56 \text{ for } 2012$$

The average annual compound rate of increase for a trend line starting in 1972 is 0.54 percent. This is a 50 percent cut in the average rate of return from holding such a stand of timber.

*Dr. William Hoover is a Professor of Forestry in the Department of Forestry and Natural Resources at Purdue University. Greg Preston is the State Statistician for the Indiana Agricultural Statistics Service in West Lafayette, Indiana.*

## Getting Stoned

By Mike Warner

Now that I have your attention let's discuss the ABC's of using stone or rock or gravel or aggregate, or whatever you choose to call it, in your forestry operations. For the purposes of this article let's refer to it as "stone" since that is what got your attention and got you to this point.

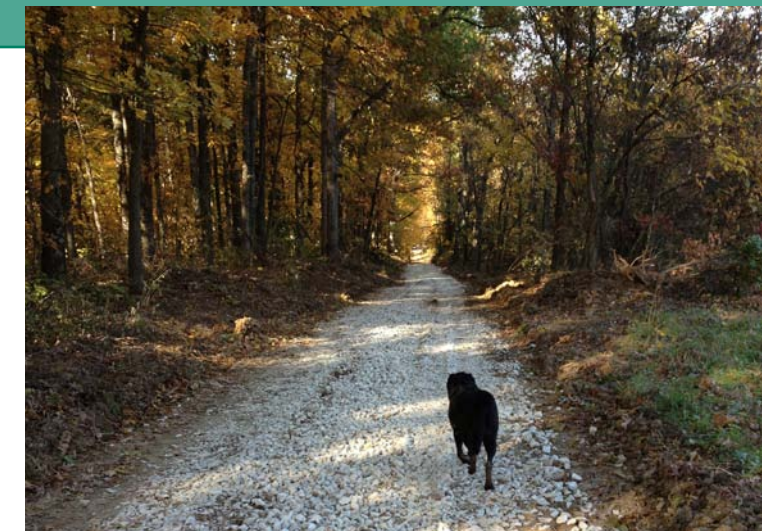
Although it is an added expense, stone is a valuable material on almost every logging job. Stone provides all-weather access to trucks, protects stream crossings, and provides erosion control for critical areas on your forest property. When used properly stone will pay for itself by increasing productivity and by providing access to your timber resource. Land owners who plan for and provide good access to their timber can certainly expect more interest and higher returns from timber buyers at sale time.

### Where to use Stone?

Stone is referenced in nearly every one of the Indiana Logging and Forestry Best Management Practices. Highway entrances are a common place stone is used on logging projects. The idea is to prevent mud from getting on the highway which is both a sediment and safety concern. It is also a good way to avoid those nasty looks from highway travelers, and the tickets from the highway patrol you get when they have just driven through the muck you left on the road. Ideally, at least a couple hundred feet of road should be stoned at highway entrances to allow truck tires to clean off and drop their loads of dirt and mud before reaching the highway. This "cleaning" is also helpful in reducing the spread of invasive species.

In some cases it may be necessary to stone the entire road from the highway to the landing area. If you need to use the road in all weather conditions, stone will keep the road more passable and help prevent sediment problems that will occur with heavy use during wet weather.

Stone is effective in stabilizing the soft road and trail approaches to stream crossings. These areas can contribute large amounts of sediment if they are not reinforced with stone. Whenever possible it is best to excavate some of the soil from these approaches before placing the stone. This



helps hold the stone in place allowing it to do its job more effectively. Stone is also useful at culvert inlets and outlets to protect critical areas and to act as an energy dissipater, reducing sediment delivery to water courses.

### What Type of Stone?

Three types of stone are most commonly used in the applications discussed above. Number 2 limestone is a fist-sized stone mostly used as the base for logging roads and truck pads at landing areas. This mid-sized stone bonds well with the soil and has the strength necessary to support heavy logging equipment. Rip-rap is a larger stone with mixed sizes ranging from 4" to 14" in diameter. It is most useful at road and trail approaches to stream crossings and around culvert inlets and outlets. The larger size and weight is needed where water velocities would wash a smaller stone away. The third stone is smaller and is the number 53 limestone. It typically contains stone that is no larger than one inch in size and often has a percentage of fines (ground up limestone). This stone is mostly used to top off the larger stone placed beneath it. This smaller stone and fines help bond the stone together, reduces water penetration and provides a smoother travel surface.

In most cases 4" to 6" of stone is needed to support logging trucks for any length of time. This assumes a solid soil foundation underneath. Anything less is "window dressing". Rather than economizing on the depth of stone, consider placing plenty of stone where it is needed most and skipping other less critical areas.

cont'd on page 11

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*By Brian MacGowan*

As an extension specialist at Purdue University, my primary role is to teach people about wildlife conservation and empower the citizens of Indiana with the ability to make informed decisions regarding wildlife management which ultimately helps to improve their quality of life. The *Woodland Steward* is one outlet that I value in getting wildlife, forestry and other information to Indiana woodland owners and it has been my pleasure to serve as chairperson of the *Woodland Steward* editorial board since 2008. One of the things we commonly ask in Extension is, “Are we making a difference?”

In finding answers to this simple, yet complex, question we are asked to evaluate what we do relative to the cost of doing it. Each year contributions from member organizations, many Soil and Water Conservation Districts, and hundreds of readers fund all production and mailing costs for three issues of the *Woodland Steward* each year to over 30,000 subscribers. With increasing costs of production and budgetary constraints by contributors, the “value” of this publication has been questioned by some. To this end, the *Woodland Steward* Board of Directors authorized a survey of *Woodland Steward* subscribers to help us learn more about our readers and evaluate the use and impact of the *Woodland Steward*.

In October 2011, a survey was mailed to 1,100 readers. A total of 254 usable surveys were returned or completed online. We asked readers general questions about their woodland, reasons for ownership, management activities, and use of the *Woodland Steward* and education.

Readers owned an average of 71.6 acres, first acquiring woodlands in 1978 on average. Scenery, habitat for wildlife, and passing on land to their heirs were the most important reasons for owning woodlands in Indiana. Few participated in USDA Farm Bill programs, but 35% of readers had acreage enrolled in the Indiana Classified Forest and Wildlands Program. While only 19% had written stewardship plans for their woodlands, this rate is almost 5 times higher than the national average. Even though production of timber products was moderately important as a reason why they own their woods, 54% had trees removed from their woodlands. Trees were mature (77%), improve quality of remaining trees

(64%), remove trees damaged by natural catastrophe (42%), needed wood for own use (29%), needed additional income (24%) were the most common reasons for removing trees.

Many recreation or management activities occurred within the past five years. Hunting (55%), recreation other than hunting (43%), trail maintenance (32%), tree planting (20%), and invasive species control (20%) were the most common activities. For the readers who answered, one in four managed their woodlands specifically for wildlife, with most (90%) managing for white-tailed deer and more than half for small mammals, game birds, and songbirds.

Ninety percent indicated they received the *Woodland Steward* within the past two years and read much of its content. Most (72%) were not aware the *Woodland Steward* is available online. The features that were most important to readers were forest pest and disease updates, invasive species control, days gone by picture, wildlife management, forest/timber management, and how-to articles. The use, value or relevance of the information was mixed. About half (50% to 54%) of the readers indicated that information in the *Woodland Steward* did not meet their expectations or impacted how they manage their woodlands. However, about half (51% to 58%) indicated that the information is relative to their needs, information learned has saved/earned them money, and they have implemented at least one new practice learned from an article.

What does this all mean? Readers of the *Woodland Steward* own more forestland and give more forethought to long-term management than the average woodland owner in Indiana. Our board meets three times a year to discuss the editorial plan and article content. According with survey results, we do a good job with the topics we cover and features, but there is room to improve upon the information we provide. In this age of blogs, tweets and texts, the *Woodland Steward* provides a unique medium for communication and education.

*Brian MacGowan is an Extension Wildlife Specialist with Purdue University's Department of Forestry.*

*Getting Stoned, cont'd from page 9*

## Disappearing Stone?

Most loggers have stories about disappearing stone. Unstable soils usually associated with unpacked fill material and poorly drained soils can become bottomless pits and swallow all of the stone you place there. These unstable areas are commonly found around newly installed culverts and at stream crossings.

Possible solutions to this problem include adequately packing the fill as it is placed and provide water drainage away from the site to prevent saturation of the fill. In an ideal world the road should be allowed to “settle” for a year before it is used for logging.

Another way to avoid losing stone in “soft spots” is to place geo-textile fabric under your stone. This fabric provides 3 functions: SEPARATION of the stone from the soil beneath, FILTRATION which allows excess water to pass from the stone layers to the soil below, and REINFORCEMENT by supporting the tensile forces that cannot be carried by the stone or soil. At a cost of \$1.00 per square yard the fabric will pay for itself many times over by reducing the amount of stone needed in these soft areas.

*The following county SWCD's have made a contribution so that you can receive your copy of the Woodland Steward. If your county is a supporter, please thank them and let them know you appreciate the newsletter.*

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## Bald Eagles in Indiana

By John Castrale

The recovery of the Bald Eagle in North America and Indiana has been a remarkable success story. With fewer than 500 pairs counted in the lower 48 states during a survey during 1963, the population now exceeds 10,000 pairs in the same area. Steps critical to this rebound include the banning of DDT and other pesticides the 1970's, protection under the Endangered Species Act and the Bald and Golden Eagle Protection Act, improved habitat conditions, and reintroduction projects in several states. Efforts by many governmental and private agencies and individuals have resulted in thriving numbers today and, as a result, the Bald Eagle was taken off the U.S. Endangered Species list in 2007 and Indiana's list in 2008. It was once a rare event to encounter a Bald Eagle over much of the lower 48 states, but now Hoosiers have an excellent chance of seeing an eagle without driving very far during most times of the year.

The Wildlife Diversity Unit of the Indianan Division of Fish and Wildlife was instrumental in the recovery by obtaining and releasing Bald Eagles in south-central Indiana in the 1980's. From 1985-1989, 73 eagles were transplanted from nests in Wisconsin and Alaska at 5-6 weeks of age and cared for at a facility at Lake Monroe. When the young birds were capable of flight at 10-12 weeks of age, they were released and provided food until they perfected their fishing skills. By the end of the fall, they had left the area with the expectation that when they reached maturity in 4-5 years, they would return to Indiana to establish breeding territories and nest. About a third of the released eagles survived and nested beginning in 1989, over 90 years after the last documented Indiana nesting record. Today that number has grown to over 150 nesting pairs and nests can be found in over half of Indiana's 92 counties (Figure 1). Greatest concentrations are at the larger lakes and reservoirs such as Patoka and Monroe reservoirs and along larger rivers, especially the Wabash, White, and Ohio Rivers. Most nests are on private property, although public lands host a disproportionate number.

Bald Eagles can be encountered about anywhere in Indiana throughout the year, but they are most often found near larger bodies of water where they prey primarily on fish and water birds. Their feeding habits are diverse and they will feed on a variety of animals

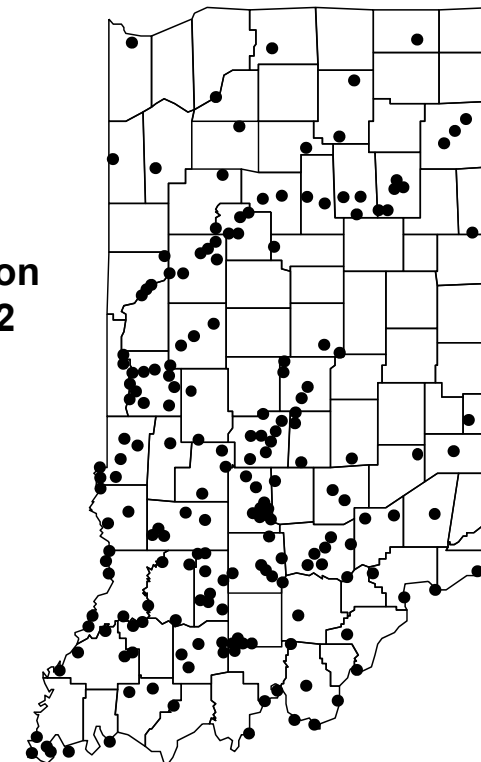


Paul Bolstad, University of Minnesota, Bugwood.org

including road-killed birds and mammals and dead deer in fields. Nests are in larger, older trees usually near water, but can be over a mile away from water. Because the long wingspan of a Bald Eagle makes it difficult to navigate in thick vegetation, nests are generally near the shoreline or forest edge or opening, on a hillside slope, in an isolated tree or slightly above the surrounding forest canopy. Tree species most often used in Indiana include: eastern cottonwood, American sycamore, oaks, and eastern white pine. Most nest trees are living, although occasionally a dead snag is used. The large stick nests are placed near a major fork in the tree and more than one nest may be built in a territory. Because of the large size of the nests that are used for many consecutive years, nest trees may topple or branches supporting nests (6-10 feet in diameter) may be broken during wind and ice storms. Managing for Bald Eagles consists of encouraging or protecting large potential nest trees near water, minimizing disturbance near existing nest sites, and maintaining good water and wetlands that support healthy fish and water bird populations.

Although no longer governed under the Endangered Species Act, strong protection for Bald Eagles is still in place as a result of the Migratory Bird Treaty Act and especially the Bald and Golden Eagle Protection Act. In fact, the Bald Eagle has legal protection surpassing almost all other birds in the United States. Not only is it illegal to harm or disturb (even if actions are unintentional) an

### Bald Eagle nest distribution through 2012



individual eagle without a permit, nests and areas around the nest tree are also protected. The U.S. Fish and Wildlife Service has published National Bald Eagle Management Guidelines, in part to benefit individuals from knowingly violating the law. These management guidelines prescribe distances between eagle nests and various man-made activities and may limit certain types of activities, especially during the nesting season which begins around February to March depending on geographic location. Although tree-cutting may be prohibited in the close vicinity of an eagle nest, timber harvesting is allowed at greater distances outside of the breeding season. A U.S. Fish and Wildlife biologist should be consulted about the specifics of these guidelines and permits can be obtained if activities cannot be avoided that may result in harm to a Bald Eagle.

*John Castrale is a Nongame Bird Biologist with the Indiana Division of Fish and Wildlife. He has coordinated the restoration of bald eagles, peregrine falcons and osprey in Indiana.*

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## The Clean Water Act and Your Woodland Trails and Access Roads

By Duane McCoy

In case you did not know, there is currently a fight going on across the nation to keep you from having to get a permit in order to have or build a forest access road. The 9th District Court in the Northwest last year came down with a decision (Northwest Environmental Defense Center v Doug Decker, the Oregon State Forester in his official capacity, et. al.) that all forest access roads are an industrial practice that needs to be regulated under the National Pollutant Discharge Elimination System (NPDES) under the Clean Water Act. This would have already had direct affects on the industry in the Northwest and probably federal ground already, but congress put a moratorium on the EPA changing their rules and standards concerning this decision until September 30, 2012.

Currently, the EPA is reviewing their rules to confirm why Forest Access Roads do **NOT** need a NPDES permit, and Congress has been working to amend the Clean Water Act, but these two endeavors may or may not help the forest products community in Indiana. Also, there are many states, including Indiana, that have filed against the 9th District's decision to the Supreme Court, and the Supreme Court has determined that they are going to hear the case.

What could this mean to you? We are not really sure at this point, but at the worst, it could mean a long permitting process for every timber harvest in every state that would have to go through each state's environmental protection agency. At best, we will have to more closely evaluate how much impact forest roads have on water quality and the way EPA will direct the states on how or what to regulate in regards to these roads in the future. We gather this water quality information regularly already in a qualitative sense, but there is little quantitative data to show how much of an impact, little or big, that forest access roads have on water quality throughout the nation. Below is an excerpt from the Federal Register/Vol. 77, No. 100/Wednesday, May 23, 2012/Proposed Rules, which can be found in its entirety at this link <http://www.gpo.gov/fdsys/pkg/FR-2012-05-23/pdf/2012-12524.pdf>.

### III. Approaches for Managing Stormwater Discharges from Forest Roads

*The Agency is considering several options for addressing significant water quality impacts caused by stormwater discharges from forest roads. EPA is considering designating a subset of stormwater discharges from forest roads for appropriate action under section 402(p)(6) of the Act. Section 402(p)(6) allows the EPA flexibility in issuing regulations to address designated stormwater discharges and does not require the use of NPDES permits. 33 U.S.C. 1342(p)(6). Section 402(p) allows for a broad range of regulatory and nonregulatory approaches and provides flexibility as to which stormwater discharges, if any, should be designated under Section 402(p)(6). For example, in lieu of regulation, EPA could support or defer to other federal, state, tribal, local, and voluntary programs. If EPA does determine that regulation under Section 402(p)(6) is appropriate for a subset of stormwater discharges from forest roads, such a regulation might address discharges only from roads used for logging or might address discharges based on contribution of the discharge to a water quality problem. Section 402(p)(6), in turn, provides considerable flexibility to EPA if it does designate any discharges for regulation in how it regulates those discharges. EPA intends to further study the impacts of stormwater discharges from forest roads, available management practices and approaches, and the effectiveness of existing Federal, State, Tribal, local and private programs in managing these discharges, as it considers appropriate next steps.*

### Clean Water Act (cont'd from page 14)

Another thing to consider and remember is that you can currently be held accountable under the Clean Water Act and other federal and state laws for practices carried out on your land which impact water quality. If you have a timber sale on your land and there are large impacts to water quality, you can be held responsible under these laws and forced to fix the problem(s) and/or be fined. What is being fought over now is whether or not you have to get a permit under these laws in order to have, maintain, or construct new forest access roads.

What can you do? Many are already fighting for you, the forest products community of Indiana, at the state and federal levels, but you can help by making sure these access roads and all parts of your timber harvests are laid out, constructed, used, and closed out well. Also, you can join the Indiana Forest and Woodlands Owners Association (IFWOA), the Indiana Hardwood Lumbermen's Association (IHLA), or other organizations and associations as a member and keep yourself informed and involved.

*Duane McCoy is the Timber Buyer Licensing Forestry for the Indiana Division of Forestry. Duane first joined the Division in 1996 and currently works on the Timber Buyers Licensing program, Indiana Forestry Best Management Practices (BMP) program, Watershed Conservation through Forestry program, and the Hoosier Ecosystem Experiment (HEE) Research Forest project.*

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