

Property Management

Tool simplifies pond building

By LYNN BETTS

OBTAINING a quick, accurate estimate of the cost of building a farm pond could be a whole lot easier in the future, thanks to a new online computer program.

In less than 15 minutes, PondBuilder can place a proposed pond in the landscape, generate an aerial photo with the pond's permanent and temporary pool areas clearly drawn, estimate the cubic yards of dirt to be moved, figure size and length of pipe needed, and create an accurate cost estimate.

That rapid turnaround time compares to several months using current methods in most parts of the country, where it takes time for conservationists in USDA field offices to schedule and make a field site visit for preliminary surveys,

Key Points

- New computer software offers significant time-savings.
- Programs can only be used with LiDAR information.
- The Internet-based programs are accurate within 1 foot.

and then more time back in the office to make the calculations for sizes and costs.

PondBuilder is one of several new online programs now possible because of new LiDAR (light detection and ranging) elevation data being made available by government agencies in some states. LiDAR data, gathered by aircraft with mounted laser equipment, are accurate within 1 foot in most terrain. Billions of LiDAR-generated points in effect reproduce 3-D location and elevation sketches of the terrain, including water-

ways, ditches, hills, roadways and tree cover. Government agencies are beginning to use it to plan road building projects, update floodplain maps and other projects to save time from traditional land surveying.

The PondBuilder program was developed by Agren Inc., of Carroll, Iowa, as part of a conservation innovation grant from the Natural Resources Conservation Service. Conservationists tested it in four counties last year, and it is now being offered to 40 more counties there at a reduced rate as part of another NRCS grant.

"Before we awarded the grant, I visited field offices and talked to people who had used some of the tools on a trial basis," says NRCS State Conservationist Rich Sims. "I was impressed by their enthusiasm for the time-savings the PondBuilder offered. Even

better, though, was that extensive ground truthing by field offices showed that cost estimates made in the office from this program were very accurate. It's important to us to be able to rely on original cost estimates, so we don't have to go through contract modifications that take time and create problems for us."

Expanding nationwide

In Iowa, the Department of Natural Resources has about 90% of the needed LiDAR information collected now, with plans to have it all available by March.

LiDAR information is being gathered across the country, says Tom Buman, Agren president. "We've been talking with people in Ohio, Michigan and Nebraska, and there's some interest in these programs in Missouri and Minnesota. I believe Pennsylvania and Louisiana are using LiDAR data, too. It's expanding nationwide."

In addition to the PondBuilder program, Agren offers subscriptions in Iowa for online access to a new



TOM BUMAN

BasinBuilder program for sediment and water control basins, an RCNCalculator for rainfall and runoff calculations, and a RUSLEII Calculator to predict expected erosion rates. Agren is also working on a wetlands tool and a waterway tool similar to PondBuilder.

The tools are Internet-based, Buman says, because upfront costs for software and storage would be too high for individuals. "This technology is easy to use, fast and accurate, and that's what we all want."

Because of logistics, the huge amounts of data and current lack of complete LiDAR coverage, don't expect to be able to get your pond estimate or benefit from the use of the other programs in the next 15 minutes. But the technology has the potential to be used across the country, and it one day could be common.

Betts writes from Iowa.

COST ESTIMATE: Get a detailed, accurate cost estimate to build ponds like this one in less than 15 minutes in NRCS offices with new software and LiDAR elevation data.

■ For more information, e-mail Buman at tom@agren-inc.com or visit www.agren-inc.com.



Spending restraint key to wealth



ON THE MONEY

By JOHN OTTE

FARMERS and ranchers are more productive than doctors and lawyers at transforming income into wealth. That's one survey finding Thomas Stanley, chairman of the Affluent Market Institute, reports in his book "Stop Acting Rich."

Even though farmers' incomes may be lower than other occupational groups, they're among the best of the top 200 high-income-producing occupational categories in America at hanging onto money.

Odds good for farmers

"It takes 383 high-income-generating physicians to produce 100 millionaires," says Stanley. "But it takes only 53 high-income generating farmers to produce

Key Points

- Farmers follow wealth-building rule of living below their means.
- Social expectations can soak up a lot of income.
- To be with millionaires, go to farm trade shows.

100 millionaires.

Furthermore, this figure understates farmers' total wealth since the calculations exclude equity holdings in farmland, homes, livestock and equipment."

You may wonder how Stanley gets 100 millionaires from 53 high-income farmers. The answer is 47 lower-income farmers are also millionaires.

Restrain spending

"Doctors and lawyers are among the least productive because their high-status social system comes with far greater expectations about how much

they should spend on everything from food and clothing to homes and cars," says Stanley.

"Many farmers are rich because they adhere to the basic rule for building wealth: Whatever your income is, live below your means."

Impediments to wealth

"Most doctors and lawyers live in or near high cost-of-living metropolitan areas," says Stanley. "They live in expensive homes situated in exclusive neighborhoods, drive expensive motor vehicles, dress well and hyperconsume in a variety of other ways.

"In contrast, farmers live and work in rural areas. They do not demonstrate their socioeconomic status by living high on the consumption continuum.

"Spending less means farmers have more money left to save and invest," he adds.

Stanley's research sug-

gests that if you want to hang out with truly wealthy people, you're better off attending a trade show sponsored by Farm Progress Publications than a country club.

He also found that those who give away larger portions of their income to charitable causes end up accumulating more wealth.

About the research

Stanley commissioned the University of Georgia Survey Research Institute to conduct a national survey.

Researchers used estimated incidence of millionaire households within 208,790 U.S. neighborhoods. They randomly selected 5,000 households from neighborhoods with a high estimated incidence of millionaires. Ultimately, 1,500 respondents participated.

A millionaire is defined in terms of the net value of investments.

Investment suggestion

ON Aug. 12, I received an e-mail with a subject "Stock market rally on borrowed time," warns multi-millionaire trader.

"The worst is yet to come," the message said. "Now is the time to be getting out of stocks, not in. His proprietary trading model calls for a fall of at least 20% in the S&P 500 within the next four weeks and for a sharp up move in the U.S. dollar and T Bonds."

On Aug. 12, the S&P 500 stood at 1005. It closed Sept. 8, four weeks later, at 1025, up a modest 1.9%. On Aug. 12, the U.S. dollar index closed at 78.90. It closed Sept. 8 at 75.59, down about 4.2%.

You need to take a lot of what you read about financial information in e-mails and on the Internet with a grain of salt. We could say the same for political information. But we won't.

Property Management

Scenic amenities part of land's value

By JESSICA ROBINSON

DECIDING a land's worth is a tricky endeavor.

For ranching, a few of the most important attributes include improvements to the property, the eco-region of the property's location, the number of deeded acres, the availability of public

Key Points

- Scenic amenities add to the value of agricultural land.
- Land with scenic amenities is bought for nonagricultural purposes.
- Land around Jackson Hole, Wyo., sells for more than ag land in other parts of state.

and private grazing leases, and how many animal unit months of agricultural production the land can sustain. But scenic amenities also play a huge role in how land is valued.

Donald McLeod, Chris Bastian and other researchers from the Department of Agriculture and Applied Economics at the University of Wyoming studied how

environmental amenities affect land values. "Land can be viewed as having a bundle of property rights and related-use values associated with ownership. The presence of wildlife habitat, such as big game for hunting or viewing, provides opportunities for securing additional rents. The presence of water and angling opportunities on the parcel may lead to returns to fee fishing for the landowner," says McLeod.

Most ranchers and farmers buy land based on how productive the land is going to be. McLeod says "agricultural land values can be estimated by summing the discounted productive rents. This approach may reflect soil quality, capital improvements, water supply and location to markets. Agricultural land also provides land for current and future development, recreation, access to public lands, wildlife habitat, and open space."

Nonagricultural purposes

As the population of Wyoming grows, land is being purchased by more than just ranchers and farmers. Bastian says "traditional economic approaches to estimating agricultural land values have been related to the sum of the discounted rents over time, which could be captured through agricultural production activities and capital improvements. Recent trends point to the demand for agricultural lands being significantly affected by nonagricultural interests."

Jackson Hole, Wyo., has seen this type of nonagricultural growth. Mark Sunderman, Department of Economics and Finance, University of Wyoming, and his associates conducted a study and found "that nonproductive factors such as location, scenic view, location relative to the Snake River, and the presence of streams and vegetation dominate the significant factors that determine market valuation or rural properties located in the Jackson Hole Valley. Agriculture productivity factors are generally insignificant because of high land values. Thus, location and scenic and/or recreational attributes of properties located in or near Jackson Hole contribute most toward market price."

In Sunderman's study, they found that the average price of land in Jackson Hole is \$22,462 per acre, while agricultural land throughout the rest of the state averages \$344 per acre. Jackson Hole is adjacent to Grand Teton National Park and is south of the southern entrance to Yellowstone National Park. The Snake River runs through the entire valley and is home to the National Elk Refuge.

There is a ski resort nearby, and many famous people, such as Harrison Ford and former Vice President Dick Cheney, have homes there. It is located in Teton County, where only 5% of the land is privately owned; the majority of the land is owned by the National Park Service and the U.S. Forest Service. "We found that many sales contained agricultural properties being acquired for purposes other than farming or ranching. Often, this was for hunting, fishing, scenic qualities, or for future development," he says.

Robinson writes from Laramie, Wyo.



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