NATURAL RESOURCES

Economic and Revenue Forecast

Fiscal Year 2009
Fourth Quarter

June 2009

WASHINGTON STATE DEPARTMENT OF
Natural Resources
Peter Goldmark - Commissioner of Public Lands

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now and forever

Acknowledgements

The Washington State Department of Natural Resources' (DNR) *Economic and Revenue Forecast* is a collaborative effort. It is the product of information provided by private individuals and organizations, as well as DNR staff. Without their contributions, the quality of the Forecast would be greatly diminished.

I want to extend special thanks to those who provided information as part of our purchasers survey. These busy individuals and companies willingly provided information that is essential for forecasting timber removal volume.

Many DNR staff also provided data, including forecasts of revenue flows for their areas of responsibility and made significant contributions to the accuracy of the Forecast. I especially want to thank **Jed Herman, Jon Tweedale, Rich Doenges, Chris Hanlon-Meyer, Pam La Due, Paul Penhallegon, Tom Heller**, and **Karen Jennings**. Many other DNR staff provided valuable and constructive feedback on drafts of this forecast, including **Jim Hotvedt, Dorian Smith, Andrea Grimes, Jim Smego, Dan Walters,** and **Cullen Stephenson**. In the final analysis, the views expressed are my own and may not necessarily represent the views of the reviewers.

Thanks also to **Dorian Smith** and **Luis Prado** for designing the front cover and to **Bob Redling** for editing the final version.

Bob Van Schoorl who has been the Budget Director for the Department of Natural Resources for the last eight years is retiring at the end of June after 30 years of public service in state and local government. Bob • we wish you well in your retirement.

Phil Aust
Lead Economist
DNR Office of Budget and Economics
(360) 902-1031

Hard copies of this Forecast are available upon request from:
DNR Office of Budget and Economics
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Acronyms and abbreviations

Bbf	Billion Board Feet
CDN$	Canadian dollar
CPI	Consumer Price Index
CV	Clear Vision Associates
CY	Calendar Year
DNR	Washington State Department of Natural Resources
FDA	Forest Development Account
Fed	U.S. Federal Reserve Board
FOMC	Federal Open Market Committee
FY	Fiscal Year
GDP	Gross Domestic Product
ISM	Institute for Supply Management
mbf	Thousand board feet
mmbf	Million board feet
NAFTA	North American Free Trade Agreement
OPEC	Organization of Petroleum Exporting Nations
PPI	Producer Price Index
RCW	Revised Code of Washington
REIT	Real-Estate Investment Trust
RISI	Resource Information Systems, Inc.
RMCA	Resource Management Cost Account
SAAR	Seasonally Adjusted Annual Rate
TIMO	Timberland Investment Management Organization
US$	U.S. dollar
WWPA	Western Wood Products Association
WTO	World Trade Organization
Y	Japanese yen

Preface

This *Economic and Revenue Forecast* projects revenues from Washington State trust lands managed by the Washington State Department of Natural Resources (DNR). These revenues are distributed to management funds and beneficiaries as directed by statute. The Forecast information is organized by source, fund, and fiscal year.

DNR revises its Forecast quarterly to provide updated information for trust beneficiaries and department budgeting purposes. (See the Forecast Calendar at the end of this section for release dates.) We strive to produce the most accurate and objective forecast possible, based on the current policy direction of the department and available information. Actual revenues will depend on the department's future policy decisions and market conditions beyond the department's control.

This Forecast covers fiscal years 2009 through 2013. Fiscal years for Washington State government begin on July 1 and end on June 30. For example, FY 2009 runs from July 1, 2008, through June 30, 2009.

The baseline date (the point that designates the transition from "actuals" to forecast) for this Forecast is May 31, 2009. The forecast beyond that date is based on the most up-to-date market information available at the time of publication.

Unless otherwise indicated, values are expressed in nominal terms without adjustment for inflation. Therefore, interpreting trends in the Forecast requires care to separate inflationary changes in the value of money over time from changes attributable to other economic influences.

Each DNR Forecast builds on the previous one, emphasizing ongoing changes. Before preparing each Forecast, international and national macroeconomic conditions and the demand and supply for forest products are re-evaluated. The impact on projected revenues from DNR-managed trust lands is then evaluated given the current economic conditions and outlook.

DNR Forecasts provide information that is used in the *Washington Economic and Revenue Forecast* issued by the Washington State Economic and Revenue Forecast Council. The release dates for DNR's Forecasts are determined by the state's Forecast schedule and prescribed by RCW 82.33.020. The table below shows the anticipated schedule for DNR's future Economic and Revenue Forecasts.

Economic Forecast Calendar

Forecast Title	Baseline Date	Draft Data Release Date	Final Data and Publication Date (approximately)
September 2009	End Q4, FY 2009	Sept. 4, 2009	Sept. 30, 2009
November 2009	End Q1, FY 2010	Nov. 6, 2009	Nov. 30, 2009
February 2010	End Q2, FY 2010	Feb. 5, 2010	Feb. 26, 2010
June 2010	End Q3, FY 2010	June 8, 2010	June 30, 2010

Introduction and Forecast Highlights

Market changes since March Forecast. Over the last three months, housing starts continued to fall • they are down by another 10 percent from the previous three months and down by 50 percent from the same period last year. While housing has triggered the greatest recession that the U.S. economy has seen since the great depression, it has pushed the forest products industry into a depression.

Sales prices. As a result of falling demand for forest products, log and stumpage prices continued to fall • in April, DNR's average stumpage price was down by $80/mbf (or 38 percent) for the calendar year. In May, prices came back $5/mbf to $135/mbf, but still remain at historically low levels.

We now expect prices to remain at or near their current level next year and recover only modestly in FY 2011. As a result, we have reduced our forecast sales prices in FY 2010 to $135/mbf down by 34 percent from the March forecast and $155/mbf in FY 2011, down by 25 percent.

Sales volume. Because of lower demand for timber, the department has experienced a high level of no bids, averaging 40 percent since the March Forecast. While some of these sales were reoffers, year-to-date through May, about 18 percent (or 97 mmbf) of the offered volume did not sell. The department has withdrawn about 80 mmbf (or 44 percent) of the volume offered from the June sales packet.

As a result, we now expect sales for all of FY 2009 to be 544 mmbf, including 67 mmbf of blowdown sales. This is down by 122 mmbf, or 18 percent, from the March Forecast. Some of these sales have been moved into subsequent years. Planned sales for FY 2010 have been increased by 21 mmbf to 744 mmbf; while planned sales for FY 2011 have been increased by 50 mmbf to 657 mmbf.

Forecast removal volume. Purchasers continue to delay removals in response to deteriorating demand for lumber and falling stumpage prices. As a result, we have reduced our forecast of removals for FY 2009 by 39 mmbf (or 7 percent) from 549 to 510 mmbf.

Forecast removals in FY 2010 are down by 87 mmbf (or 14 percent) from 627 to 540 mmbf, primarily because of the shift in sales from FY 2009 to FY 2010 and FY 2011, but also because of deteriorating market demand. The reduction in forecast removals would have been even greater if not for the planned increase in contract harvest sales to 20 percent. We have increased forecast removals in FY 2011 by 35 mmbf (or 5 percent)

from 655 to 690 mmbf, in part because of anticipated improved market conditions in FY 2011, but primarily from growing volumes under contract.

Bottom line for timber revenues. As a result of reduced removals in FY 2009, forecast timber revenues are down by $9.6 million (or 7 percent) from $138.8 million to $129.2 million. For the next biennium, revenues are down by $36.5 million (or 14 percent) from $259.2 to $222.7 million. These reductions are due to a combination of lower sales prices (amounting to roughly 60 percent of the change), changes in sales volume (25 percent of the change), and a shift in volume due to market forces and other factors (15 percent of the change).

Lease revenue. The reduction in timber revenue is partially offset by an increase in lease revenue. Lease revenues are up by $1.7 million this fiscal year (FY 2009); over half of that increase is the result of higher geoduck prices, but actual collections of agricultural and commercial real estate have also been higher than forecast. For FY 2010 and beyond, we increased forecast lease revenue by about $1.0 million per year or 3 percent because of higher geoduck and agricultural prices than previously forecast. In FY 2010 lease revenue will make up almost one-third of the department's revenue compared to just 18 percent in FY 2006. (See attached spreadsheet for detail.)

See table 3.2 at the end of this report for the forecast of revenues to specific funds.

Caveat. This Forecast does not include any adjustment for defaults, liquidated damages, or extensions[1]. The department currently has over $45 million worth of timber contracts valued over $350/mbf that will expire over the next year, most in the next six to nine months. Extensions will only affect the timing of revenues (assuming that extended sales are eventually harvested), but future liquidated damages and defaults that would have a major negative impact on our revenues.

[1] Liquidated damages are specified in some DNR contracts and allow the purchaser to terminate the sales by returning the unharvested timber to the department and paying a fee which is less than the full value of the contract.

Part 1. Macroeconomic Conditions

U.S. real gross domestic product (GDP) contracted at an annual rate of over 6 percent in the first quarter of CY 2009 for the second quarter in a row. This was the third straight quarter of decline and we expect at least one, but perhaps two, more quarters of negative or near zero growth before GDP turns around in late CY 2009. The magnitude of the current U.S. recession is the deepest since the great depression and it will be late 2010 or even early 2011 before U.S. GDP returns to the level it was in mid 2008. Still, as bad as things are, they are even worse in Europe and Japan where real GDP isn't expected to return to its former level until 2012 and 2015 respectively. The trade dependent newly industrialized Asian countries[2] economies are expected to contract by over 5 percent this year and grow at less than 1 percent next year.

China and India are the only real bright spots where real GDP has slowed to just 4.8 percent. Although this is significantly less than half of the 10.6 percent rate they managed in 2007, growth in China and India has not gone negative and both nations are already on their way to recovery. The other developing economies of the world are expected to contract by 1 percent this year, compared to 5 percent growth in CY 2008 and 6 percent the year before.

U.S. economy

"A number of factors are likely to continue to weigh on consumer spending, among them the weak labor market, the declines in equity and housing wealth that households have experienced over the past two years, and still-tight credit conditions,"

Ben Bernanke
Chairman of the Federal Reserve
June 2, 2009

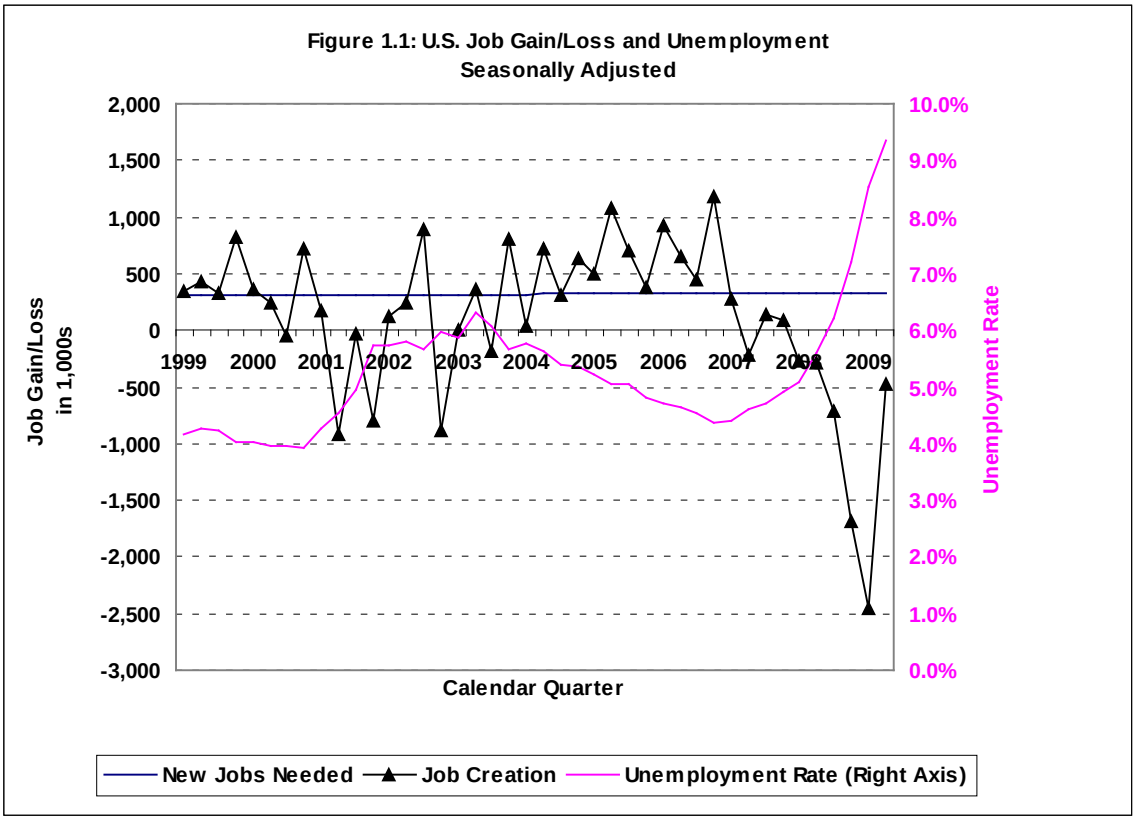
Employment. In the last quarter of CY 2008 and the first quarter of CY 2009, the U.S. economy lost over four million jobs and the unemployment rate increased from 6.2 percent to 8.5 percent. During the first two months of the second quarter the economy lost on average just fewer than 160,000 jobs per month while the unemployment rate increased to 9.4 percent. The job loss in the last two months was a great improvement

[2] Korea, Taiwan, Singapore, and Hong Kong,

from the average loss of 690,000 jobs per month for the previous three months. (See **Figure 1.1** for detail.)

The US economy needs to create 110,000 net new jobs each month just to keep up with the growth in the labor force and prevent the unemployment rate from increasing. The Federal stimulus package is projected to add about 2 million to 2.5 million jobs, but these jobs will be created over the next three years and will only be temporary. The impact on employment from the bankruptcies of Chrysler, GM and associated companies is still unknown.

During the last year and a half, the economy lost 5.7 million jobs while the labor force grew by another 700,000 workers. As a result, 6.4 million jobs are needed to bring the unemployment rate back down to 5 percent. Even if the economy created an extra 400,000 jobs per quarter as it did in the strong growth period in CY 2005 and CY 2006, it would take four years for unemployment to return to the 5 percent rate. So we are looking at high unemployment for several years. We still expect unemployment to go above 10 percent and remain high for the next two years or so.



Energy Prices and Inflation. Surprisingly, crude oil has already recovered to $68 per barrel, and gaspline is up over $2.50 per gallon. This is primarily because of a weak U.S. dollar and seasonal demand but underlying these increases is concern about future U.S. debt and inflation. Prices are expected to come back down but will remain in a wide

trading range between $50 and $70 dollars a barrel. As the economy recovers, prices will push through the upper end of this range and remain above $70 most of the time.

The Consumer Price Index (CPI) rose at an annual rate of 3.5 percent in May but has fallen 1.3 percent over the past year. That's the largest decline in nearly 60 years, and is due mainly to a 27.3 percent decline in the energy index. The core CPI, which excludes volatile food and energy prices, actually fell in May but increased 1.8 percent over May of last year. The overall CPI has been running at or near zero for the last five months (on a 12 month basis) because of falling energy and food prices (See **Figure 2.1**).

In light of increasing economic slack here and abroad, the Federal Reserve expects that inflation will remain subdued. Moreover, the Fed sees some risk that inflation could persist for a time below rates that "best foster economic growth and price stability in the longer term."

Interest Rates. The Fed continues to hold the federal funds rate near zero and inflation remains very tame • still longer term interest rates are already on the rise. Since March, the yield on the 10-year Treasury has jumped from 2.5 percent to 3.8 percent, sending bond prices (which move in the opposite direction) down a staggering 34 percent. At the same time, mortgage rates have increased almost a full percent from 4.6 percent in March to 5.6 percent in mid-June.

Still mortgage rates are low by historical standards (mortgage rates were 6.4 percent last year at this time) and the increase in long term rates is a sign that risk premiums are returning to more normal levels as investors anticipate a recovery in the next six months. It also is a sign of concern about the U.S. budget deficit and its impact on inflation and the U.S. dollar. Mortgage rates will increase quickly as the recovery picks up speed in 2010. Hopefully, higher interest rates won't prematurely choke off the recovery.

U.S. Consumption. U.S. household wealth has fallen by $14 trillion, or 22 percent from its peak almost two years ago. During the first quarter of CY 2009, consumer borrowing fell at an annual rate of 3.5 percent (despite very low interest rates), the largest dip in at least 35 years, as households slowed their use of credit cards, auto, and home loans. The wealth effect could well depress consumption by 2 percent this year, but once households have reset their saving rate at a higher level, spending should grow at about the same rate as income going forward. This implies that U.S. consumption will grow at about 2.5 percent per year.

U.S. Real Gross Domestic Product. We expect at least one, maybe two, quarters of negative growth for the U.S. economy with real recovery not getting underway until the fourth quarter of CY 2009. Even next year will see growth at a somewhat muted level of 2.0 percent.

World economy

Recessions associated with financial crises (as this one is) tend to be severe. Recoveries from such recessions are typically slow. If such recessions are globally synchronized (as this one is) then they tend to last even longer and be followed by recoveries that are even weaker.

Key Points
International Monetary Fund
World Economic Update
April 2009

The worst may be over but the recovery will likely be slow. A typical recession lasts only about a year. The current recession is already 15 months old and counting. The recession was triggered by the collapse of the U.S. housing market and quickly crippled banks worldwide, triggering the worst ever worldwide recession since the Great Depression. The combination of these two, a financial and synchronized recession, is likely to be even more severe and the subsequent recovery much weaker than normal.

According to a recent International Monetary Fund (IMF) study, financial stress in emerging countries has reached unprecedented levels, exceeding the Asian crises in the late 1990s. No matter what is done now, 2009 will be a difficult year. The emerging nations have been hit hard because of the reduction in the demand for their exports and the reduction in the flow of capital. Trade is expected to be down 10 percent for all of 2009, and foreign investment in developing countries could be just half what it was last year. Some of the gains of the last 10 years in income levels among the poorest people of the world could be reversed and will not come back for several years.

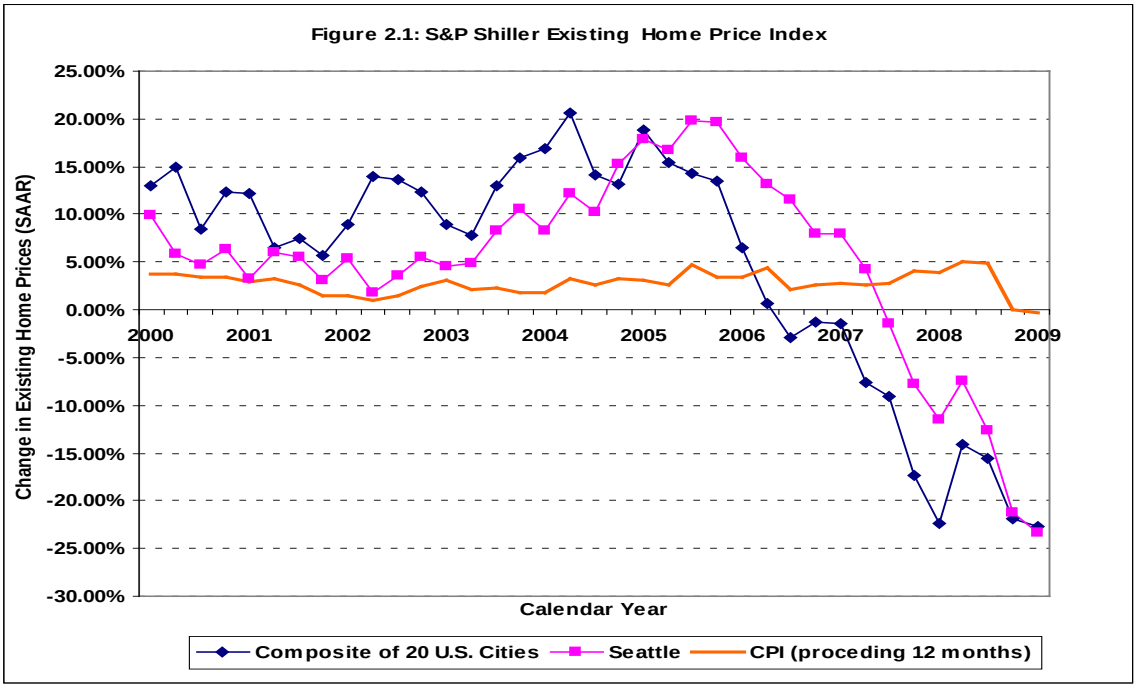
One consequence of this recession will be a speeding up in the importance of China and India in the world. Before the recession they made up about 20 percent of the world economy, when we emerge from this recession they will make up about 25 percent of the world's economy. The share of world GDP controlled by Europe and the U.S. will go down by almost the same amount – from 37 percent before the recession to 32 percent after.

Part 2. Log and Lumber Industry Factors

This chapter focuses on the specific factors that affect the stumpage values and overall timber revenues received by the Washington State Department of Natural Resources (DNR).[3] Stumpage prices reflect demand for lumber and other wood products, timber supply, and regional and local milling capacity. The demand for lumber and wood products is directly related to the demand for housing and other end-use markets.

U.S. housing market

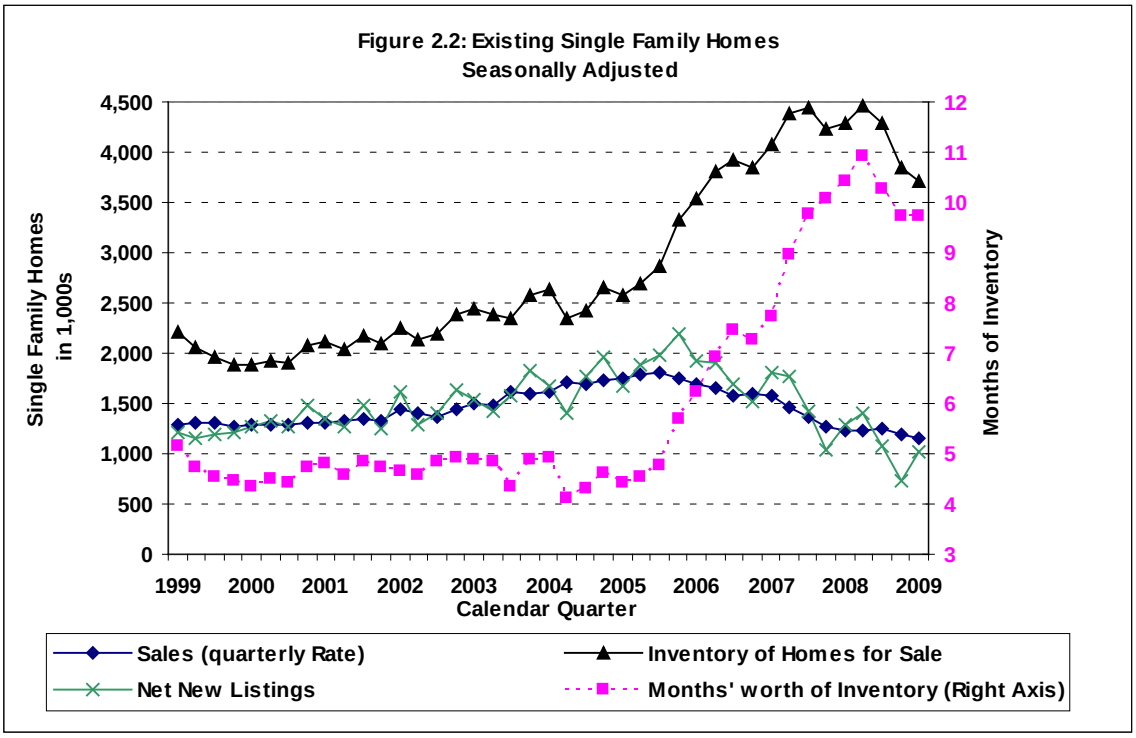
Housing Prices. During the first quarter of CY 2009, U.S. housing prices fell even faster than in the previous quarter. Based on the S&P Case-Shiller Home Price Index, the market value of an average U.S. home is now down 31 percent since the peak in mid-2006 (see **Figure 2.1**).



[3] Although DNR timber sales are a significant source of timber in the Pacific Northwest, volumes generally are not sufficiently large enough to affect prices.

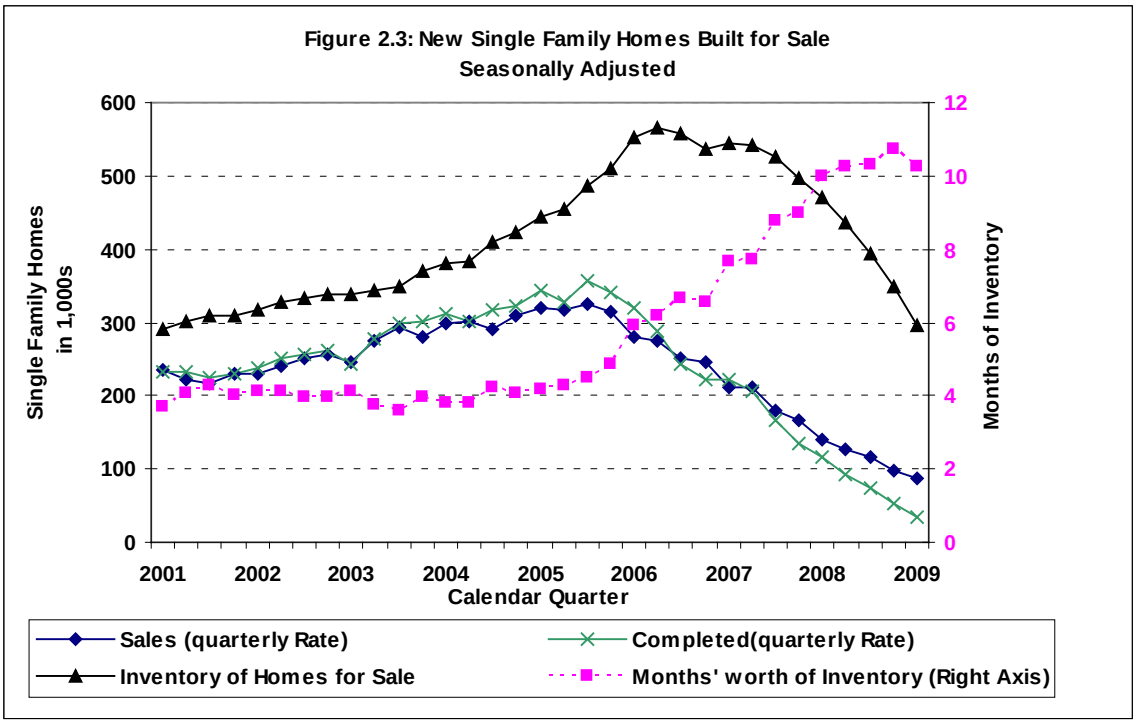
In March, prices dropped in all 20 metropolitan areas in the survey including 17 that fell at double-digit annual rates. There is no sign of even a slowdown in the rate at which prices are falling. An estimated 10 million homes are in negative equity— the cost of their mortgage exceeds the current market value.

Existing Home Sales. Existing home sales in the first quarter of CY 2009 were 1.1 million, down by an annual rate of 13 percent from the previous quarter as the downward momentum continued. Still that was an improvement from the last quarter of CY 2008 when sales fell at an annual rate of 20 percent. In the first quarter of CY 2009, the number of new listings increased—perhaps because of better weather—even though the data is seasonally adjusted. But listings remained slightly below the number of sales so that the total inventory fell slightly. The months' worth of unsold houses at the current sales rates remained constant at 9.7 months' worth as the fall in inventory was offset by the fall in average months' sales during the quarter. See **Figure 2.2** for detail.

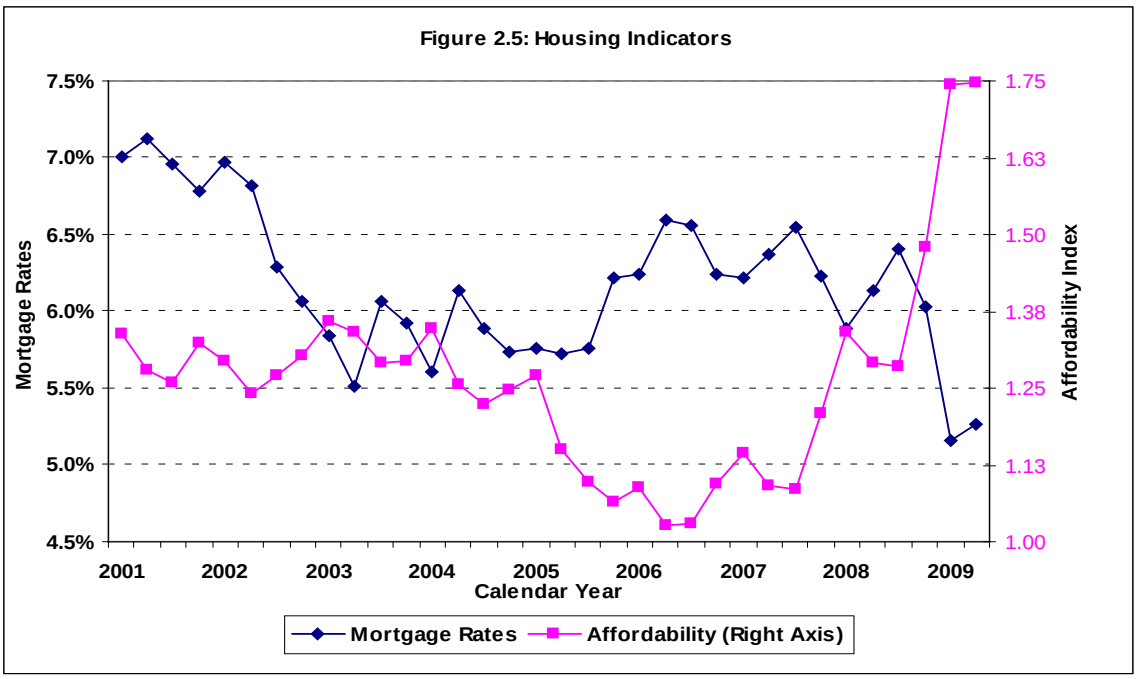


New Home Sales. Despite lower prices and government incentives, sales of new homes continued to plummet. For the quarter, sales were just 87,000, down 11 percent from the previous quarter, down 38 percent from last year and down an eye-popping 73 percent from the peak in 2005.

The good news is that the number of completions (net new listings) continues to fall as builders hold new homes off the market. The inventory of new homes for sale is now at normal levels but the months worth of inventory at current sales rates will remain elevated (now at 10.3 months) until sales improve. See **Figure 2.3** for detail.



Affordability. Mortgage rates took an unexpected jump in the second quarter and stood at 5.6 percent in mid June. That was nearly a full point above the record low rate of 4.61 percent in March. Still, with housing prices (relative to income) at historically low levels, and interest rates up but still low by historical levels, housing is more affordable • relative to income • than ever before. **(**See **Figure 2.5** for detail**)**.



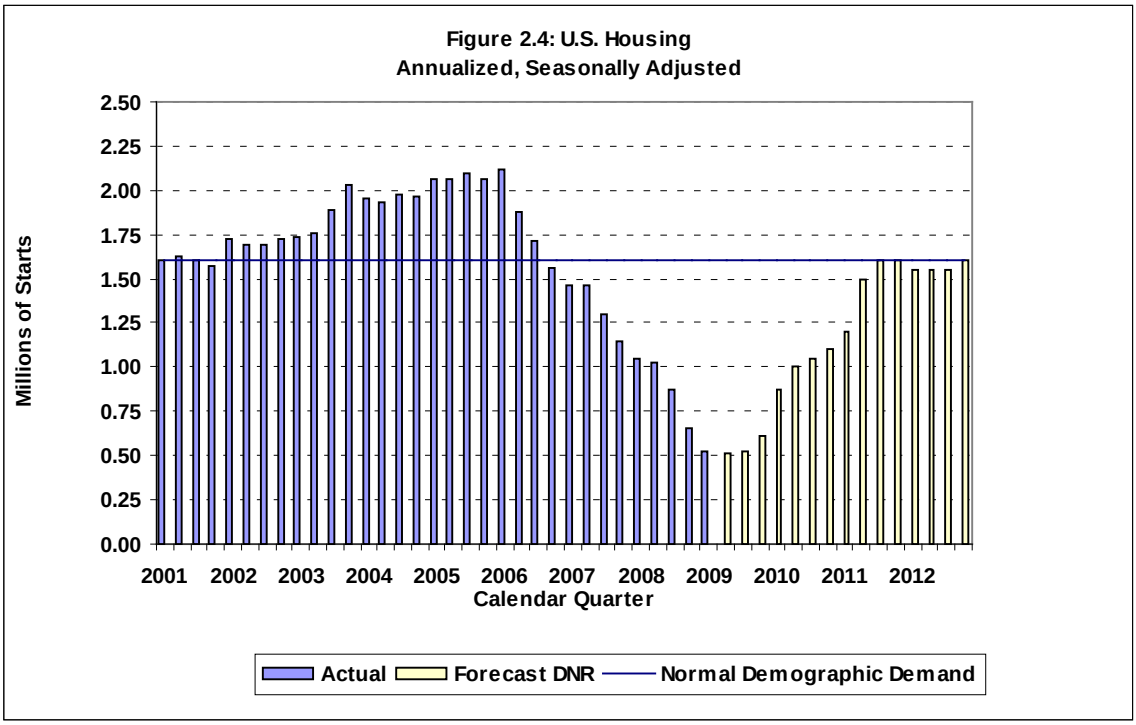
The **Affordability Index** is the ratio of the income required to qualify for the median-priced existing single-family home and the median family income. In April 2009 the affordability index was $60,927/$34,848 or 1.748.

Unfortunately improving affordability hasn't resulted in increased sales of existing or new homes, and it won't as long as consumers expect housing prices to fall even further and • perhaps most important • are concerned about their jobs and personal financial balance sheet.

Housing Starts. The home-ownership rate in the U.S. has fallen for four years, the first time that has happened in a quarter of a century. In 2008, 2.3 million families lost their homes or faced foreclosure—double the average before the crisis—reducing the home-ownership rate from 69 percent in 2004 to 67.5 percent at the end of 2008. Based on demographic demand for new housing of 1.6 million starts per year, the oversupply of homes created during the bubble has now been eliminated. In our forecast we don't predict housing starts will return to that level until mid CY 2011. If that forecast holds then we should have accumulated significant pent-up demand for new homes at that point. (See **Figure 2.4** for detail.)

May starts were up by 16 percent to 532,000 from the record low in April of 458,000, but down by 46 percent from last year and down 74 percent from the 2.0 million in May of 2005. The more interesting number is single family starts which are up for the third month in a row • up 8 percent from their all time low in February, but down 41 percent from last year and down 77 percent from May of CY 2005.

We hesitate to label the increase in single family starts as "good news" at a time when sales of new and existing single family homes are still falling and there is over 10 months of unsold inventory already available. (See page 14 for detail.) It would be more exciting to see inventories falling because of increased sales.

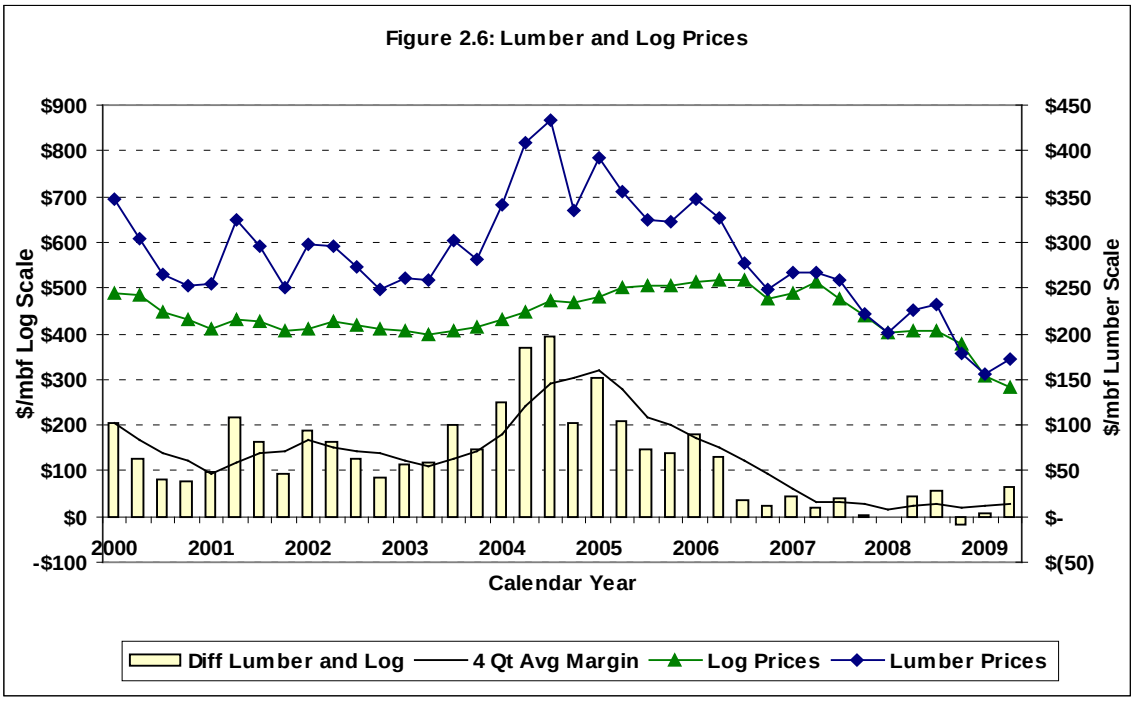


We now expect housing starts to remain in the 500,000 level for the next two quarters before beginning its recovery. This changed the shape of our housing starts recovery by flattening the bottom in 2009 and showing a sharper recovery in CY 2010. Despite continued pent-up demand the recovery will likely be cut off in 2011 by rising interest rates.

Lumber, logs, and stumpage prices

Western lumber production is forecast to decrease by nearly 26 percent in 2009 to 9.7 billion board feet – about half what it was in 2004. That volume is the lowest since the 1930s and represents a little more than half the volume Western mills produced five years earlier. As a result, mill capacity utilization has fallen to just 50 percent.

Lumber and Log Prices. After falling over the last two quarters, lumber prices staged a comeback in April – up 9.8 percent from the average for the previous quarter. Prices gave back part of that gain in May and are up 8 percent for the first two months of the second quarter. Still, prices are down 27 percent from this time last year. As a result of higher lumber prices, mill margins that had been pushed close to or even below zero for the last two quarters, now are at $65/mbf log scale ($32.50/mbf lumber scale). This is still half the "normal" markup of $130/mbf log scale ($65/mbf lumber scale) but it is a big improvement from the negative $30/mbf experienced by the mills in the four months October through January. (See **Figure 2.6 for detail**.)



Note: The volume of lumber (measured in mbf lumber tally) actually milled from logs normally exceeds the Scribner volume measurement. The graph above uses different axes to adjust for the difference in the two measurement scales. Here the relationship is assumed to be 2:1. "Margin" is defined as the average price difference between lumber and logs after an adjustment for the two different measurement scales.

The actual situation faced by some mills is even more severe than shown in **Figure 2.6**. The average delivered log value of the timber under contract with the DNR is $369/mbf (down from $382/mbf last quarter) and the average delivered log value of timber currently being harvested is $350/mbf, compared to current log prices of $284/mbf in May. Some mills may also have agreements (obligations) to purchase private timber at prices above current market prices.

Although lumber prices have improved, the current relationship between log and lumber prices remains unsustainable. Low returns for converting logs to lumber results in upward pressure on lumber prices and downward pressure on log prices. Lumber prices have recovered some, but at current log prices, lumber would need to increase by almost 20 percent (to about $200/mbf) to make mills profitable again.

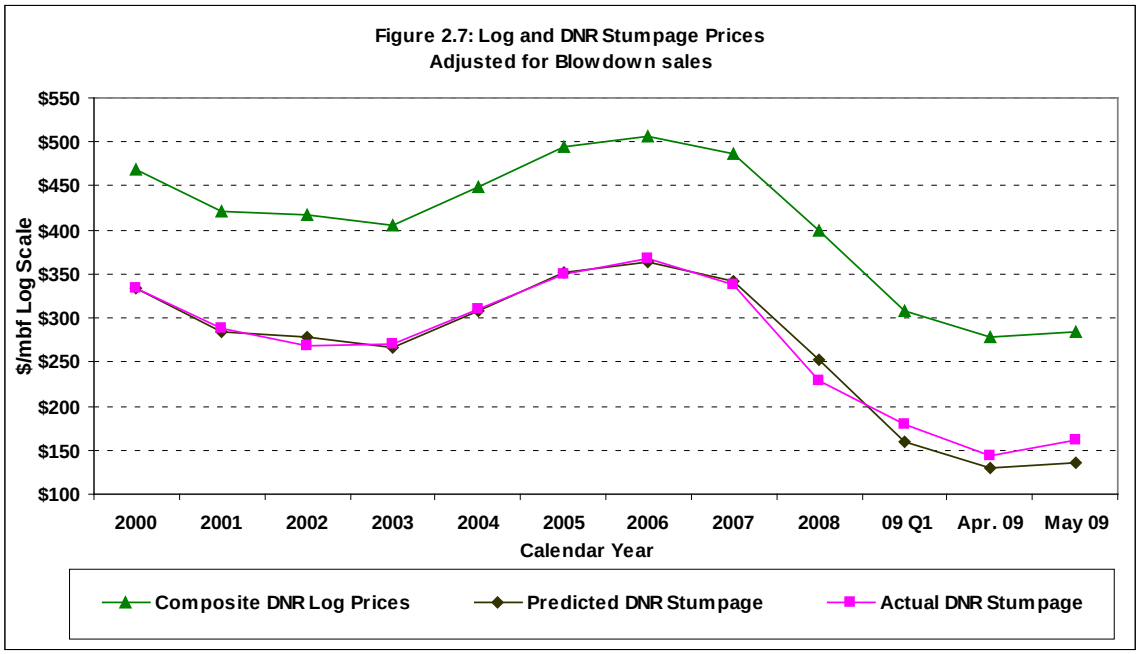
This is the third year in a row that we have been excited by a spring rally in lumber prices. Unfortunately, the last two ended in a fall downturn in both lumber and log prices. Hopefully, this recent rally will not follow suit.

How far log prices will be compressed will depend on supply-side factors. The low conversion margins that have persisted for three years are a testament to landowners' resistance to lower log prices. A major factor that makes timberland ownership different than most businesses is the ability to store timber on the stump for long periods of time at relatively low costs during downturns in the market.

However, there is a limit to timberland owners' ability to resist low prices by holding their product off the market. The shift of timberland ownership has left a greater proportion of timberlands owned by Timber Investment Management Organizations (TIMOs) and Real Estate Investment Trusts (REITs), who depend on timber revenue to cover operating costs and service debt accumulated during the acquisition of timberlands. Like the mills, TIMOs and REITs are finding themselves increasingly in survival mode rather than profit maximization mode and may be forced to accept lower log prices to generate badly needed cash flow.

For a durable commodity like forest products, market psychology and therefore current market prices are greatly dependent on future price expectations. These expectations are based on historical experience (i.e. past prices). The longer lumber and log prices remain low, the lower the expectation of prices going forward will be and the lower the incentive to hold timber off the market.

Log and DNR Stumpage Prices. Figure 2.7 shows average annual log prices and the predicted DNR stumpage prices given those log prices vs. actual stumpage prices adjusted for blowdown[4]. In CY 2008, DNR stumpage prices were $25/mbf less than predicted by the econometric model. This difference is probably due to a number of factors but it is most likely that buyers' fatigue (see March 2009 forecast for detail) from disappointing forest product markets and low profits was a major if not the main factor.



During the first five months of CY 2009 the actual prices have been $18/mbf or 18 percent more than those forecast by log prices. We believe this is due primarily to the fact that a disproportionate share of the sales that received no bidders or were withdrawn by were lower valued sales.

[4] DNR actual prices calendar year 2008 through August and the third quarter are adjusted for blowdown sales (timber damaged in a December 2007 storm in southwestern Washington). The model predicts an average harvest and delivery cost of $155/mbf in FY 08.

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Part 3. DNR's Revenue Forecast

This revenue forecast includes revenues from timber sales, upland leases, and aquatic leases. It also forecasts revenues to individual funds. Some caveats about the uncertainty of revenue forecasting are summarized at the end of this section.

Timber revenues

The Washington State Department of Natural Resources (DNR) sells timber through contracts. The department determines the total volume to be offered for sale each month, and the minimum bid for each sale. The sale is awarded to the highest bidder and the average sales price ($/mbf) is set at the time of auction. The department collects a 10 percent initial deposit at the time of sale and holds it until the sale is completed. Revenues are collected at the time of harvest (removal). The initial deposit is credited as the last 10 percent harvested. The purchaser determines the actual time of harvest within the terms of the contract. Contracts sold during FY 2008 vary in duration from three months to three years, with an average (weighted by volume) of 23 months.

Timber that is sold but not yet harvested is referred to as "volume under contract" or "inventory." Timber is added to the inventory when it is sold and removed from the inventory when it is harvested.

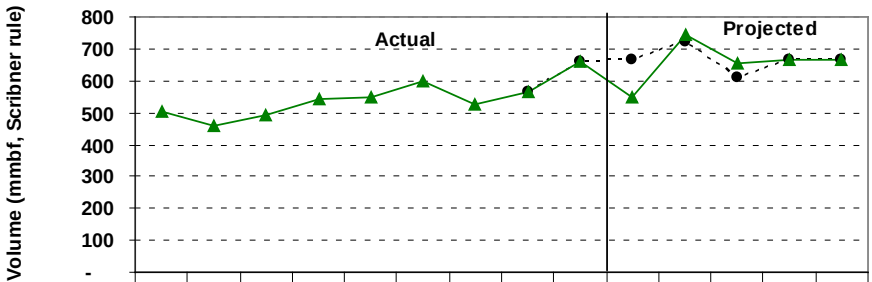
Timber Sales Volume. During the last five months (March through May), the department has experienced both low prices and high levels of "No Bids" (unsold) sales[5]. In addition, the department withdrew about 80 mmbf in May and June. The combination of the two resulted in a net reduction of 122 mmbf of the estimated level of sales during FY 2009. A portion of this volume, 21mmbf, will be rolled forward into FY 2010 and 50 mmbf will be sold in FY 2011. The remaining 51 mmbf will be held in reserve until markets recover. (See **Figure 3.1** for detail).

Since March we have reduced forecast sales volume for all of FY 2009 from 784 mmbf to 546 mmbf, including blowdown sales of 67 mmbf. Regular sales (excluding the blowdown) are down from 717 mmbf to 479 mmbf, or by a third. A similar fall-down in

[5] Department sales results are available on the DNR at: http://www.dnr.wa.gov/BusinessPermits/Topics/TimberSaleAuction/Pages/psl_ts_auction_results.aspx

sales level during FY 2010 could significantly reduce forecast revenues for next biennium (the 2009-11 biennium).

Figure 3.1: Forecast Sales Volume

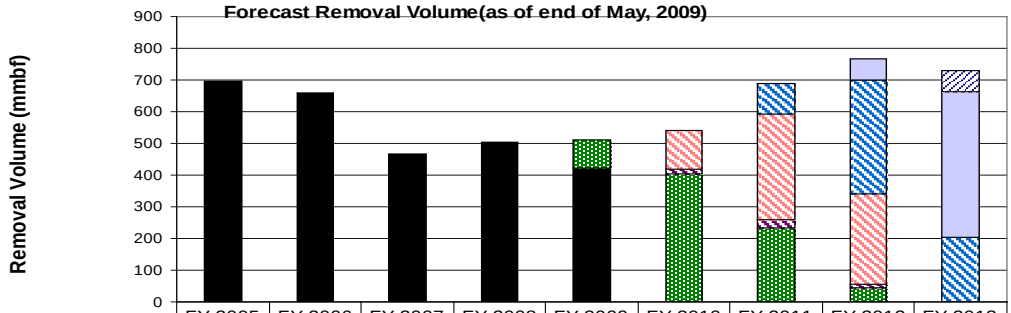


	00	01	02	03	04	05	06	07	08	09	10	11	12	13
November Forecast								565	660	668	723	607	667	667
Current Forecast	503	461	495	542	548	599	528	565	660	546	744	657	667	667
Change										(122)	21	50	-	-
Percent Change										-18%	3%	8%	0%	0%

Fiscal year ending June 30

Timber Removal Volume. For each Forecast, we survey the purchasers with outstanding volumes under contract to determine their planned timing of removals. The latest survey, conducted in the first week of May, indicates that purchasers reduced their harvest plans for FY 2009 and FY 2010. Purchasers plan to harvest 14 percent of the volume under contract this fiscal year (FY 2009), and the remaining 81 percent next biennium. (See **Figure 3.2** for detail.)

Figure 3.2: June 2009 Revenue Forecast
Forecast Removal Volume(as of end of May, 2009)



	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Sales in FY 13						-	-	-	67
Sales in FY 12						-	-	67	461
Sales in FY 11				-	-	-	97	357	203
Sales in FY 10				-	-	123	334	287	0
New Sales in FY 09				-	-	16	26	10	-
Sales Under Contract				-	88	402	233	44	(0)
Actual Removals to date	696	658	466	504	421				
Total	696	658	466	504	510	540	690	765	730

Fiscal Year

This is the first survey in which purchasers indicated they wouldn't harvest some of the volume under contract until FY 2012.

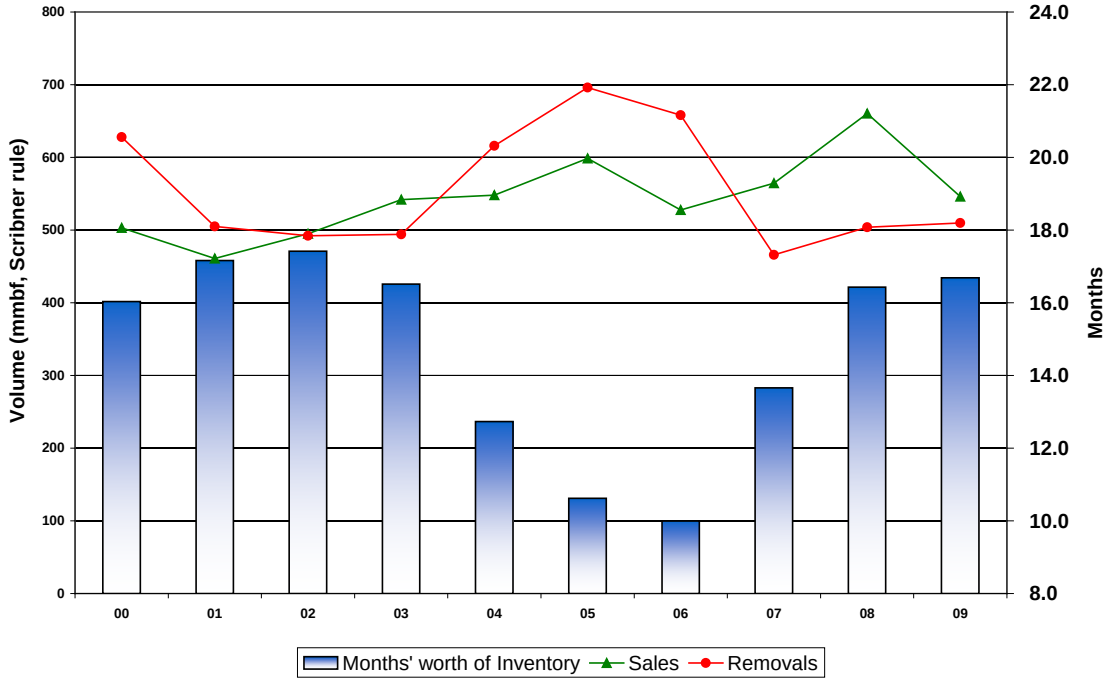
Through May (the first 11 months of FY 2009) purchasers removed just 421 mmbf. We estimate that removals during the last months of FY 2009 will be 88 mmbf. This high level of removals in just one month is primarily due to the department's accounting procedures at the end of a fiscal year to account for accrued removals.

The volume under contract at the end of FY 2008 (June 30, 2008) was 733 mmbf. At the end of May, the volume under contract increased to 767 mmbf. By the end of FY 2009 (June 30, 2009) DNR planned sales of 52 mmbf while forecast removals are expected to be 88 mmbf. The result will leave 694 mmbf under contract by the end of June, down from 838 mmbf projected in March, primarily because actual sales fell short of March's forecast.

Half of the removals forecast to be harvested next biennium are expected to come from sales already sold. Most of the remainder is expected to come from the sales sold in FY 2010. Only 8 percent are projected to come from sales sold in FY 2011.

Removals in FY 2010 and beyond. In 2004, purchasers began to reduce the volume under contract by harvesting more than the department sold. We attributed this, in part, to the department's shortened contracts, but it was primarily due to higher demand for logs and lumber to feed the growing housing bubble. By FY 2006, the months' worth under contract had dropped to 10 months. But by the end of FY 2008, purchasers increased the volume under contract and the sales-to-harvest duration from 10 months to over 16 months. We anticipate that 16 months' worth of volume will still be under contract by the end of FY 2009. (See **Figure 3.3** for detail.)

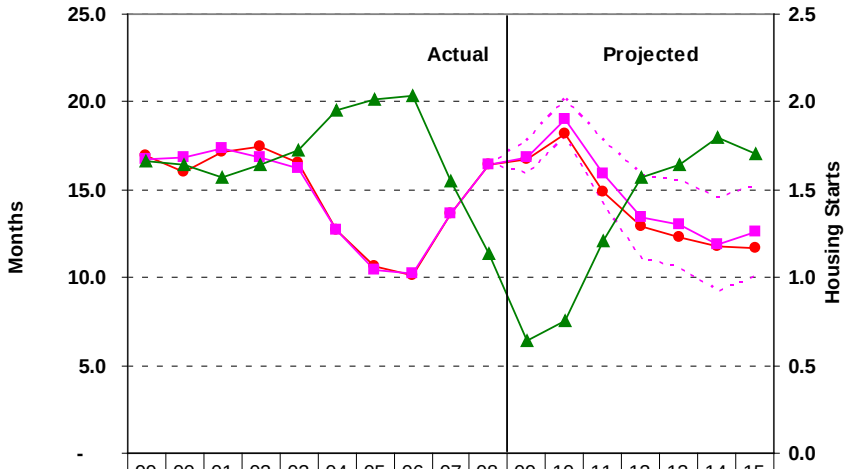
Figure 3.3: Timber Volume - Sales and Removal



To improve our forecasting ability, we attempted to develop a model to forecast the months' worth of inventory under contract. We found a good fit between the months worth of inventory and housing starts over the historical period. (See March 2009 Forecast for detail.) The projected housing starts shown in **Figure 3.4** were used to estimate the months' worth of inventory over the Forecast period. And an upper and lower confidence interval was estimated. (See **Figure 3.4** for detail.)

In Senate Bill 6166, the legislature increased the proportion of contract harvest sales the department can offer from 10 percent to 20 percent. The timing of the harvest of these sales is under the control of the department and are harvested from six to nine months after they are sold. Increasing the proportion of contract harvest sales in the department's sales mix will reduce the average months' worth under contract from what the model predicts based on the historical relationship between housing starts and removals.

Figure 3.4: Timber Volume - Removal Housing starts (Model 5)



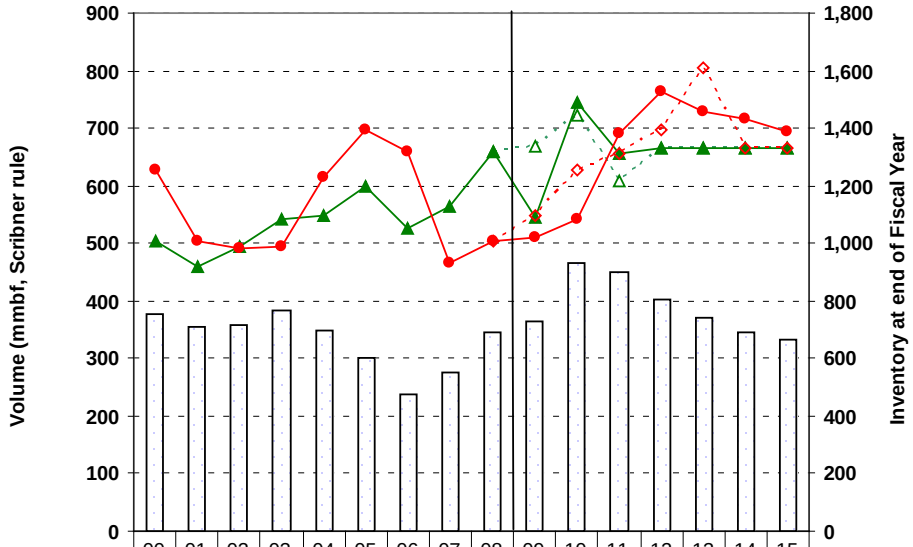
	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
Months worth of Inventory	16.	16.	17.	17.	16.	12.	10.	10.	13.	16.	16.	18.	14.	12.	12.	11.	11.
Upper 95										16	18	20	18	16	15	15	15
Predicted Months worth	17	17	17	17	16	13	10	10	14	16	17	19	16	13	13	12	13
Lower 95										16	16	18	14	11	11	9	10
Housing starts	1.6	1.6	1.5	1.6	1.7	1.9	2.0	2.0	1.5	1.1	0.6	0.7	1.2	1.5	1.6	1.8	1.7

Fiscal Year

Based on the lower sales volume and the projected months worth of inventory shown in **Figure 3.4,** the forecast removal volumes were reduced during FY 2010 and FY 2011 by 7 percent and 14 percent respectively, and then increased by 5 percent and 10 percent in FY 2012 and FY 2013 from that forecast in March. (See **Figure 3.5** for detail.)

If our forecast holds, the volume under contract will increase to 934 mmbf, or 18 months' worth, at the end of FY 2010—up from just 475 mmbf or 10.2 months' worth at the end of FY 2006. The volume under contract falls to 11.7 months' worth at the end of the Forecast period. It is possible that purchasers could further delay removals on individual sales and increase the average time under contract by even more than we forecast.

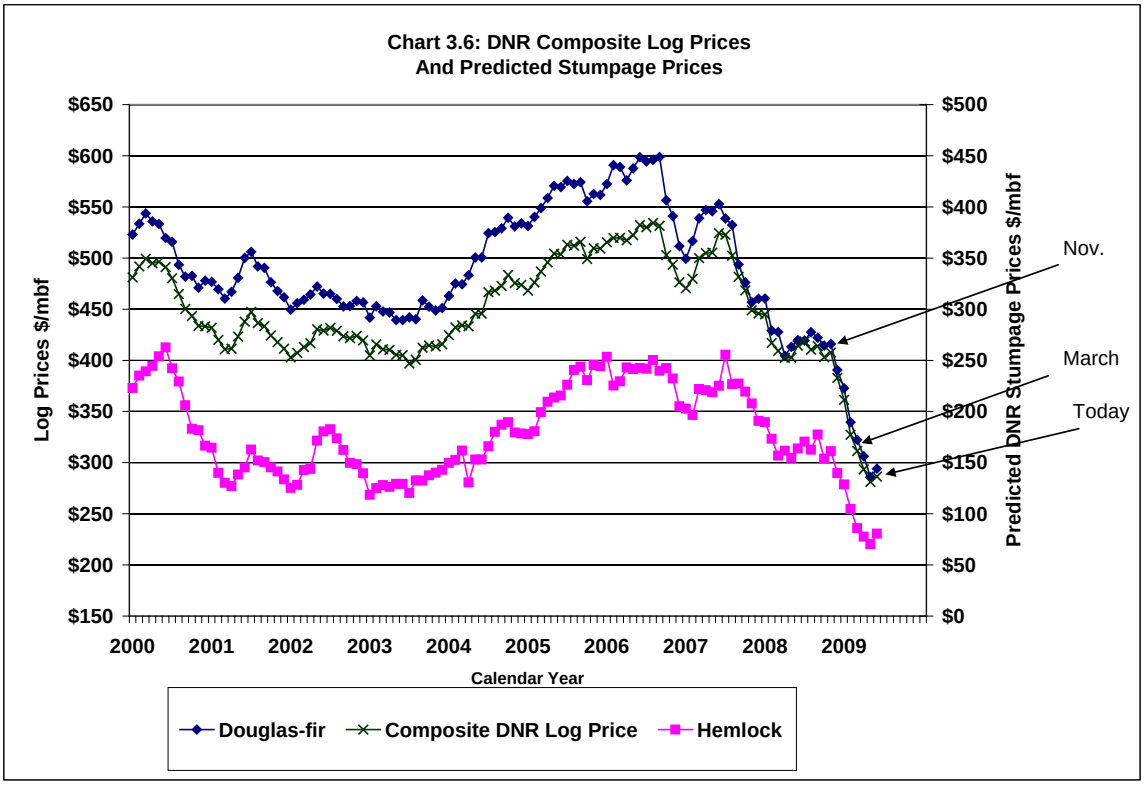
Figure 3.5: Timber Volume - Sales and Removal



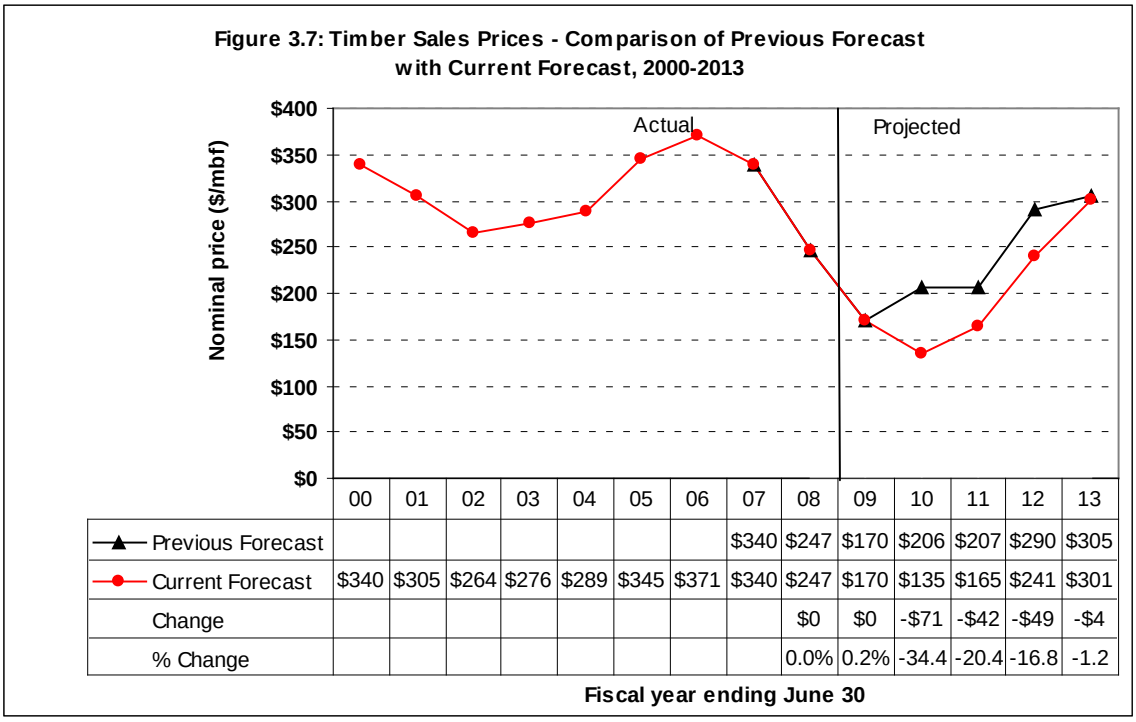
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
Inventory at end of Period	757	713	716	764	696	599	475	552	694	730	934	901	803	740	692	664
Months worth of Inventory	16.	17.	17.	16.	12.	10.	10.	13.	16.	16.	18.	14.	12.	12.	11.	11.
Sales - Previous Forecast									660	668	723	607	667	667	667	667
Sales - Current Forecast	503	461	495	542	548	599	528	565	660	546	744	657	667	667	667	667
Removals Prev. Forecast									504	549	627	655	698	806	667	667
Removals - Current Forcast	628	505	492	494	616	696	658	466	504	510	540	690	765	730	715	695
Change										-39	-87	35	67	-76	28	0
Percent Change										-7%	-14	5%	10%	-9%	4%	0%

Timber Sales Prices. When we prepared the March 2009 Forecast, our composite log price was at $310/mbf and had trended downward for the previous seven months. Based on those log prices, we estimated that DNR stumpage prices were at the $160/mbf level. At that time we thought prices would recover to about $200/mbf next fiscal year. In the three months since we made the March Forecast, log prices have fallen to $285/mbf and the corresponding stumpage price has fallen to just $135/mbf. (See **Figure 3.6** for details on DNR composite log prices and projected DNR stumpage prices.) Now, we expect prices to remain at this level next fiscal year and stage only a mild recovery in FY 2010.

The draft results for the department's June sales became available just as this Forecast went to press: For June the department sold 17 of the 20 sales offered for sale, (93% by volume). The average price was $159/mbf with an overbid percentage of 56%. It's hard to judge on one month's sales but still, it's a good result.



Forecast DNR average stumpage prices for FY 2009 were unchanged from March at $170/mbf despite falling stumpage prices as the volume sold was reduced enough to compensate for the falling prices. The average price in FY 2009 is lower than normal because of the blowdown sales. If the blowdown sales are excluded, the forecast sales price increases by $16/mbf to $186/mbf.



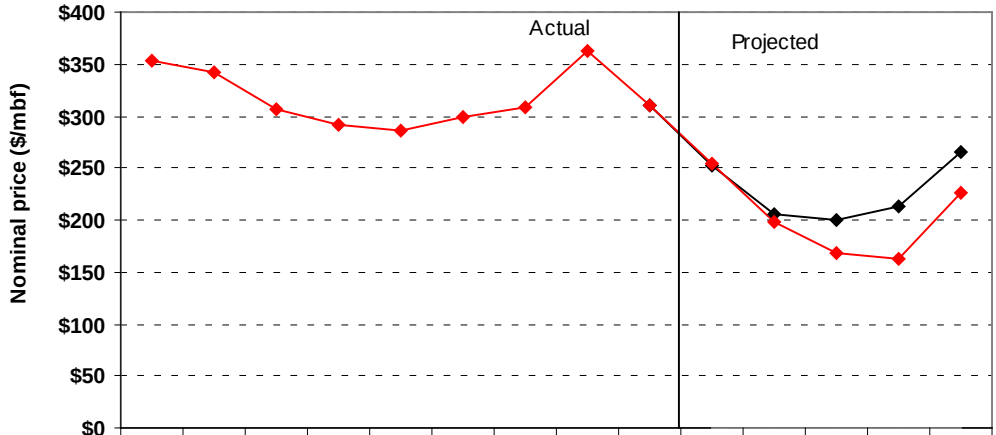
	00	01	02	03	04	05	06	07	08	09	10	11	12	13
Previous Forecast								$340	$247	$170	$206	$207	$290	$305
Current Forecast	$340	$305	$264	$276	$289	$345	$371	$340	$247	$170	$135	$165	$241	$301
Change									$0	$0	-$71	-$42	-$49	-$4
% Change									0.0%	0.2%	-34.4	-20.4	-16.8	-1.2

We now expect prices to remain in the $135/mbf-to-$175/mbf range for the next two years, averaging $135 in FY 2010 increasing to $165 in FY 2011. The forecast price during FY 2012 would be under $150/mbf if the department had not withdrawn 60 mmbf of low-price sales in that year and increased the proportion of contract harvest sales to 20 percent.

We expect market conditions to improve significantly in FY 2012 and FY 2013 because of a bounce-back in the U.S. housing market, and continued growing world demand for lumber. As a result, DNR stumpage prices are forecast to increase sharply by over $80/mbf (or 33 percent in FY 2012) over those in FY 2011 (see **Figure 3.7** for details).

Timber Removal Prices. Removal prices are a function of sales prices and removal timing. They can be thought of as a moving average of previous sales prices weighted by the volume of sales removed from each previous sales period. The weights assumed in this Forecast are shown in **Figure 3.2**. This results in a smoothing out and a lag of removal prices compared to sales prices. For example, sales prices are forecast to trough at $135/mbf in FY 2010 while removal prices aren't forecast to trough until two years later in FY 2012 to $28/mbf higher at $163/mbf.

Figure 3.8: Timber Removal Prices - Comparison of Previous Forecast with Current Forecast, 2000-2013



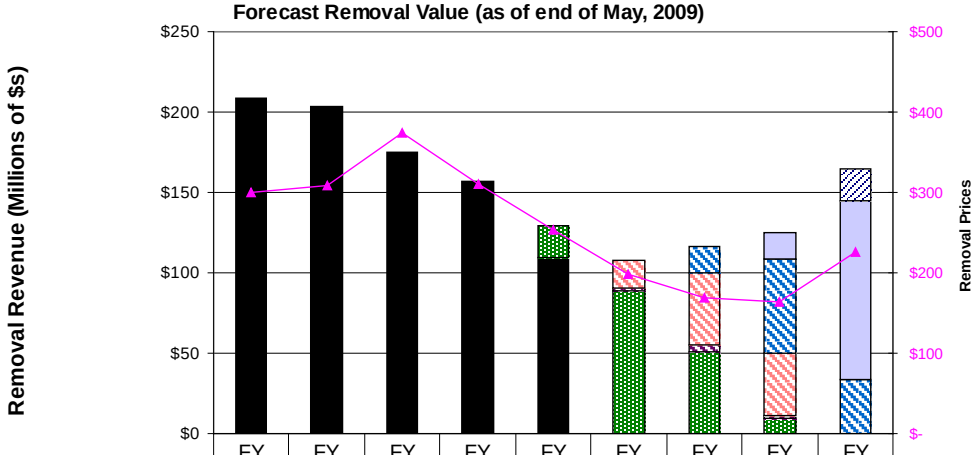
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Previous Forecast									$311	$253	$205	$200	$214	$266
Current Forecast	$353	$342	$307	$291	$286	$300	$309	$363	$311	$253	$199	$169	$163	$225
Change										$1	-$6	-$31	-$50	-$40
Percent Change										0%	-3%	-16%	-24%	-15%

Fiscal year ending June 30

Forecast removal prices in FY 2009 are up just slightly (65 cents/mbf) from the March Forecast. Removal prices in FY 2010 are down by about 3 percent from the Forecast in March due to the lower sales prices in the last part of FY 2009 and FY 2010. Forecast removal prices are down an average of $31/mbf or 16 percent in FY 2011. Forecast average removal prices in FY 2012 are down sharply ($50/mbf or 24 percent), reflecting the sharp reduction in Forecast sales prices in FY 2010 and FY 2011 (see **Figure 3.8** for details).

Timber Removal Revenues. Figure 3.9 shows removal revenues by when the timber was sold ("under contract" is already sold) and the average removal price for that fiscal year. Over 62 percent of the forecast harvest value next biennium (FY 2010 and FY 2011) will come from the volume under contract at the end of May; 31 percent is forecast to come from sales sold in June and FY 2010; the remaining 7 percent comes from sales sold in FY 2011.

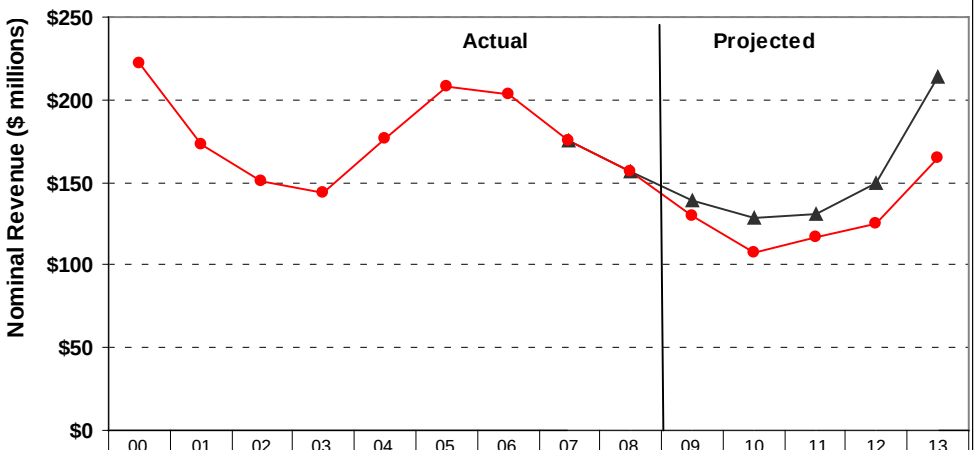
Figure 3.9: June 2009 Revenue Forecast
Forecast Removal Value (as of end of May, 2009)



	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Sales in FY 13									$20
Sales in FY 12								$16	$111
Sales in FY 11							$16	$59	$34
Sales in FY 10						$17	$45	$39	$0
New Sales in FY 09						$2	$4	$2	$-
Sales Under Contract					$19	$88	$51	$10	$-
Actual Removals to date	$208	$203	$175	$157	$110				
Total	$208	$203	$175	$157	$129	$107	$116	$125	$165
$/mbf	$299	$309	$375	$311	$253	$199	$169	$163	$225

Fiscal Year

Figure 3.10: Timber Removal Revenues - Comparison of Previous Forecast with Current Forecast, 2000-2013



	00	01	02	03	04	05	06	07	08	09	10	11	12	13
Previous Forecast								$175	$157	$139	$128	$131	$149	$214
Current Forecast	$222	$173	$151	$144	$176	$208	$203	$175	$157	$129	$107	$116	$125	$165
Change								-	-	(9.6)	(21.1)	(14.5)	(24.3)	(49.6)
% Change								0%	0%	-7%	-16%	-11%	-16%	-23%

Fiscal year ending June 30

Forecast timber revenues are down by $9.6 million (7 percent) in FY 2009 because of a reduction in the forecast removal volume. Forecast revenues are down by $21.1 million (16 percent) and $14.5 million (11 percent) in FY 2011 and FY 2012. In the 2011-13 biennium, revenues are down by $73.9 million, or 20.3 percent. See **Figure 3.10** for detail.

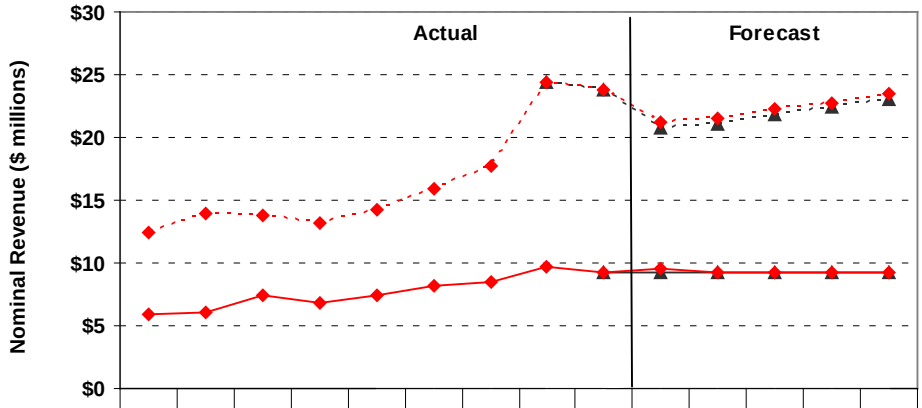
Upland lease revenues

Upland lease revenues are generated primarily from leases and the sale of valuable materials, other than timber. In this Forecast, upland lease revenues are divided into two categories:

1) **Commercial**—Commercial real estate leases.
2) **Agricultural and Other**—Agricultural, special use, mineral and hydrocarbon, rights-of-way, communication sites, special forest products leases, and sale of other valuable materials.

Commercial. Through the first three quarters of FY 2009, actual revenues are about $800,000 more than forecast in March. Based on this information we have increased forecast revenues from commercial real estate by $400,000. We believe the higher-than-forecast revenues are the result of a one-time refund of management fees. The current economic slowdown has increased the probability that we could see some of our commercial building lessees go out of business and default. For now, we are leaving our forecast for future years unchanged but we believe the risk of downside adjustment to our current forecast is probably greater than the upside risk.

Figure 3.11: Upland Lease Revenue - Comparison of Previous Forecast with Current Forecast, 2000-2013



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Ag. & Other Prev. For.								24.4	23.8	20.8	21.1	21.8	22.4	23.1
Ag & Other - Current	12.5	14.0	13.8	13.2	14.2	15.9	17.8	24.4	23.8	21.2	21.5	22.2	22.8	23.5
change					0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.4
% change								0.0%	0.0%	1.9%	1.9%	2.0%	1.6%	1.7%
Commercial Prev. For.									9.2	9.2	9.2	9.2	9.2	9.2
Commercial - Current	6.0	6.0	7.5	6.8	7.4	8.2	8.4	9.7	9.2	9.6	9.2	9.2	9.2	9.2
Change									0.0	0.4	0.0	0.0	0.0	0.0
% Change									0.0%	4.3%	0.0%	0.0%	0.0%	0.0%

Fiscal year ending June 30

Agricultural and Other. Agricultural revenues are currently down by about $860,000 from where they were at this point last year and we expect them to finish FY 2009 down $1.7 million from last year as a direct result of the worldwide economic recession, and reduced demand for commodities. Still, we anticipate good returns for agricultural resources in the coming year because of increased world population; better incomes and diets worldwide; and developing bio-fuel, wind-power, and other renewable energy markets.

Washington agricultural products have benefited by the weak dollar, which reduces their offshore prices and generally raises the prices of competing imports. In trade-weighted terms, the dollar declined about 27 percent from FY 2002 through FY 2008. But since then, the dollar has increased about 20 percent. That's not good for Washington's export-oriented agricultural commodities but we don't expect it to last over the long run. The dollar will stabilize or maybe even trend slightly downward, which will be good for Washington's commodity agricultural exports and DNR's lease revenues for agricultural and energy related leases.

Through the three quarters of FY 2009, actual collections are about $1.0 million over the pace needed to make our March forecast. Based on this stronger-than-expected showing, we are increasing the Forecast agricultural and other lease revenues in FY 2009 and in each subsequent year of the forecast by $400,000. (see **Figure 3.11** for details). At this

point we judge the upside and downside risks in agricultural and other revenues to be about balanced.

Aquatic revenues

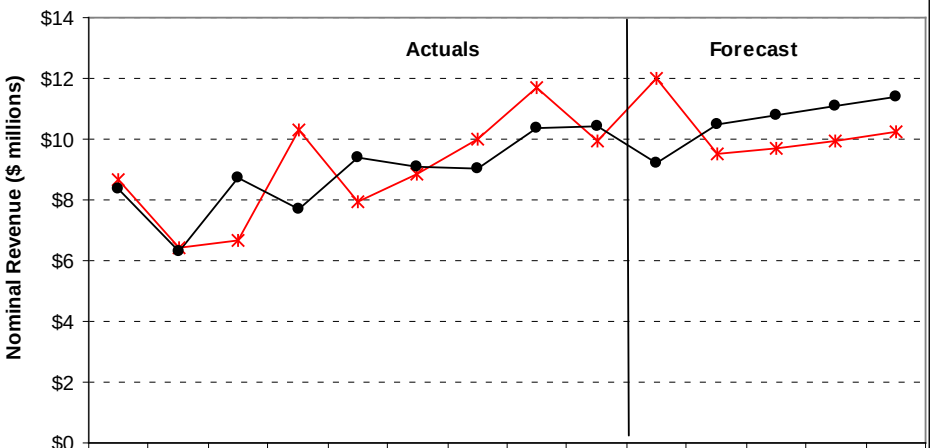
Aquatic revenues in FY 2007 were $22.1 million, up by $3.1 million, or 16 percent from FY 2006. The increase stems mainly from high geoduck prices and one-time revenues from sand and gravel royalties. Actual revenues in FY 2008 were $20.4 million as falling geoduck revenues were partially offset by higher lease revenues (see **Figure 3.12** for details).

Geoduck Revenues. Since March, the department has received higher-than-forecasted prices for geoducks. This resulted in a net increase in forecast geoduck revenues by $1.5 million in FY 2009 (see **Figure 3.12** for details). Primarily because of higher-than-forecast geoduck prices so far this year, we are increasing our projected geoduck revenues in FY 2010 and beyond. We are increasing prices by about $0.30/lb to $4.40/lb, an increase of 7.3 percent. This resulted in an increase in forecast geoduck revenues in FY 2011 and subsequent years by $700,000. At this point, we judge the upside risk to future geoduck revenues about equal to the downside risk.

Lease and Other Revenues. Lease and other aquatic revenues have been relatively high for the last two years (FY 2007 and FY 2008), growing by almost 14 percent in FY 2007 and almost 4 percent last year. Through May, actual collections were about $550,000 less than forecast. Based on this we have reduced our Forecast revenues for FY 2009 by $600,000.

Aquatic lease revenues are surprisingly volatile on a year-to-year basis, so we are not reducing our Forecast going forward. Aquatic dependent leases are adjusted annually by Producer Price Index (PPI). The adjustment factor for FY 2010 was up by 9.8 percent so we anticipate that these revenues could be up by $500,000 in FY 2010. The PPI is already moving down, and some of these gains could be erased in subsequent years. We are now forecasting a $1.3 million, or 14 percent, increase in revenues going from FY 2009 to FY 2010. The increase would put revenues back on trend, but it naturally makes us concerned, so we now judge the downside risks to our forecast of aquatic lease revenue to be greater than the upside risk.

Figure 3.12: Aquatic Revenues - Geoduck, and Lease & Other
FY 2000-2013

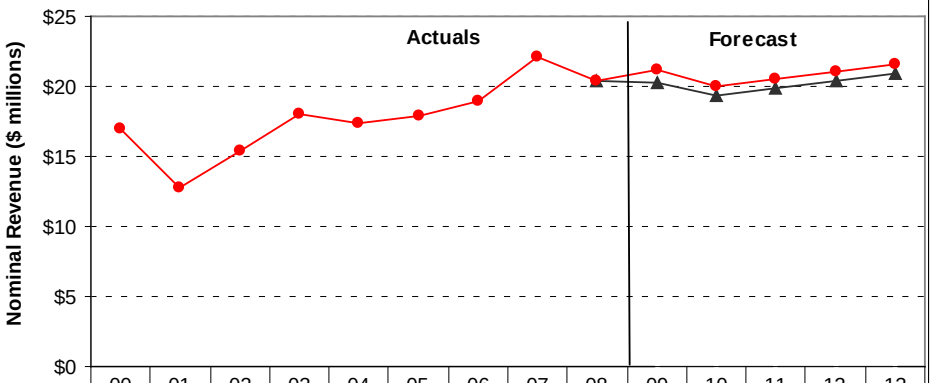


	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Geoduck	$8.7	$6.4	$6.7	$10.3	$7.9	$8.8	$10.0	$11.7	$9.9	$12.0	$9.5	$9.7	$10.0	$10.2
Lease and Other	$8.3	$6.3	$8.7	$7.7	$9.4	$9.1	$9.0	$10.3	$10.4	$9.2	$10.5	$10.8	$11.1	$11.4

Fiscal year ending June 30

Total forecast revenues to aquatic lands in FY 2009 are up by $900,000 as the one-time increase in geoduck revenues more than offsets the reduction in forecast lease revenues. Total forecast revenues in FY 2010 and beyond are up by $700,000 per year because of higher geoduck revenues (see figure 3.13 for detail).

Figure 3.13: Aquatic Revenues - Comparison of Previous Forecast
with Current Forecast, 2000-2013



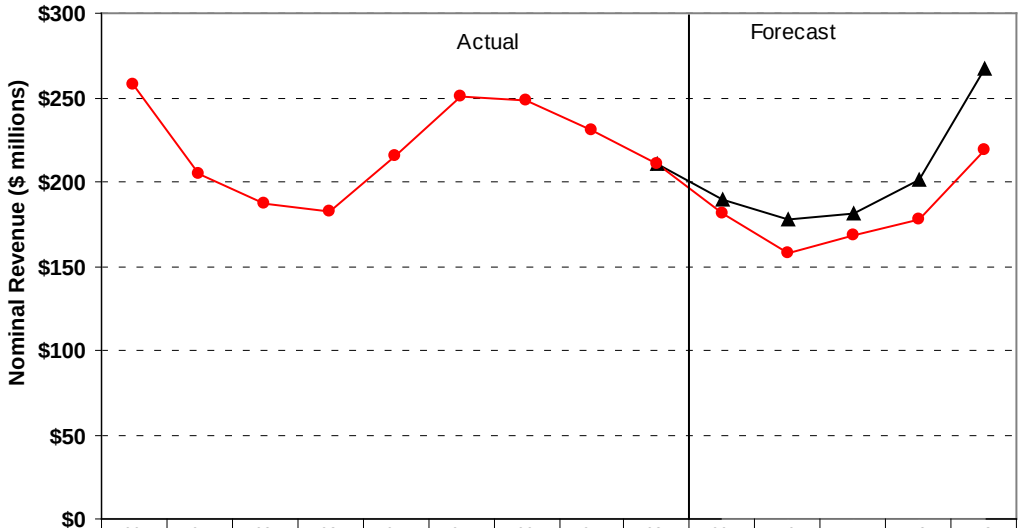
	00	01	02	03	04	05	06	07	08	09	10	11	12	13
Prev. Forecast									$20.4	$20.3	$19.3	$19.9	$20.4	$20.9
Current Forecast	$17.0	$12.7	$15.4	$18.0	$17.3	$17.9	$19.0	$22.1	$20.4	$21.2	$20.0	$20.5	$21.1	$21.6
Change										$0.9	$0.6	$0.7	$0.7	$0.7
% Change										4.4%	3.3%	3.3%	3.3%	3.3%

Fiscal year ending June 30

Total revenues from all sources

For FY 2009, revenues are down just $7.9 million, or 4 percent, from the March Forecast. For the 2009-11 biennium, total Forecast revenues are down by $33.4 million, or 9.3 percent. This reduction includes a $35.6 million reduction in timber sales value primarily from reduced prices ($25.3 million) and reduced volume ($10.3 million). Revenues during the 2011-13 biennium are down by $71.7 million or 15.3 percent. (See **Figure 3.14** for detail.)

Figure 3.14: Total Revenues - Comparison of Previous Forecast with Current Forecast, 2000-2013



	00	01	02	03	04	05	06	07	08	09	10	11	12	13
Previous forecast									$210.0	$189.0	$178.1	$181.6	$201.3	$267.4
Current Forecast	$257.3	$205.3	$187.6	$182.0	$215.4	$250.5	$248.4	$230.9	$210.0	$181.2	$158.1	$168.2	$178.0	$218.9
Change										$(7.9)	$(20.0)	$(13.4)	$(23.2)	$(48.5)
% Change										-4%	-11%	-7%	-12%	-18%

Fiscal year ending June 30

Some caveats

DNR strives to produce the most accurate and objective forecast possible, based on the department's current policy directions and information available at the time. Actual revenues will depend on future policy decisions made by the Legislature and the department, as well as market conditions beyond our control. Listed below are issues that could potentially have a significant impact on future revenues from DNR-managed lands:

- **Housing Markets.** It has been over three years since the housing downturn began, and we believe we have reached the bottom. But because that bottom is so low, a meaningful recovery of the U.S. housing market will not occur until CY 2011 and, therefore, timber prices will not rise until FY 2012. Our forecast of housing starts may prove optimistic. (See **Page 16** of this report for detail.) It is possible that the housing recovery could be pushed back even further by rising interest rates or a slower-than-expected economic recovery. This would likely result in lower timber sales prices than we currently forecast.

- **Timber Sales Volume.** As indicated earlier, the department reduced its planned sales by 116 mmbf, or 15 percent, for FY 2009 in the March Forecast and has reduced them again in this Forecast by 122 mmbf, or an additional 18 percent. We now forecast total sales for FY 2009 will be 546 mmbf including 67 mmbf of blowdown and 479 mmbf of regular sales.

  This Forecast is based on the assumption that the department will sell 744 mmbf of regular sales in FY 2010, an increase of 55 percent over the FY 2009 level. This is an ambitious target and the department may not meet this target given the level of no-bids and withdrawn sales. Unless market conditions improve, the department may not be able to sell that volume until the last half of FY 2010. If sales and revenue are delayed, then a greater portion of these sales would be harvested in the 2011-13 biennium, not the 2009-11 biennium as currently forecast, reducing forecast revenues next biennium.

- **Defaults and Extensions.** This Forecast does not include any adjustment for defaults, liquidated damages, or extensions. The department currently has over $45 million worth of timber contracts valued over $350/mbf that will expire over the next year, most in the next six to nine months. Extensions will only impact the timing of revenues (assuming that extended sales are eventually harvested), but liquidated damages and defaults could have a major negative impact on our revenues, which is not included in this forecast.

These and other future circumstances could greatly impact future revenues. As events and market conditions develop, DNR will incorporate new information in future Forecast updates.

Distribution of revenues

The distribution of timber revenues by grant are based on:

- The value of timber in the inventory (sales sold but not yet harvested) as of May 31, 2009;
- Planned sales for the remainder of FY 2009, FY 2010 and FY 2011 based on planned sales volumes; and
- The distribution of the sustainable harvest for FY 2012 and FY 2013.

Timber sales are expected to be harvested between 11.7 and 17.5 months after they are sold. (See **Figure 3.5** for details.) Distribution of lease revenues is assumed to be proportional to historic distributions.

Since a single timber sale can be worth over $3 million, dropping, adding, or delaying even one sale can represent a significant shift in revenues to a specific trust fund.

Management Fee Deduction. The 2009-11 budget passed by the Legislature extended the 30 percent RMCA deduction through the end of the 2009-11 biennium. The change and percent change in FY 2010 and FY 2011 shown in **Table 3.2** are based on a change from the revenues used in the budget analysis that reflected the 30 percent RMCA deduction. The RMCA deduction is assumed to return to 25 percent in FY 2012.

University Bond Retirement and University Permanent Funds. According to the Office of Financial Management's interpretation of generally accepted accounting principles, debt service funds (funds used to pay off debts), such as the University Bond Retirement Fund and the Washington State University Bond Retirement Fund, cannot receive revenue directly. Instead, revenue to these two funds is recorded to the respective permanent funds, and then an operating transfer is made to the appropriate debt service fund.

In FY 2007, $659,676 of revenue to the University Bond Retirement Fund was recorded to the University Permanent Fund but was not transferred to the University Bond Retirement Fund. As a result, the University Bond Retirement Fund was understated by $0.7 million, while the University Permanent Fund was overstated by the same amount.

Beginning in March 2008, the department began transferring revenues that otherwise would have gone to the University Permanent Fund to the University Bond fund to reverse the effect on revenues to the two funds. Through FY 2009 we expect to transfer $310,000 to the University Bond Retirement Fund from the University Permanent Fund. The remaining $350,000 will be transferred in FY 2010. The resulting revenues to the two funds are shown in **Table 3.2**.

Revenue forecast tables

Tables 3.1 and 3.2 on the following pages provide forecast details. **Table 3.1** focuses on the source of revenues, and **Table 3.2** focuses on the distribution of revenues. Both tables include historical and projected figures.

Table 3.1 Draft June 2009 Forecast by Source (In millions of dollars)

Change from Mar. 08 Forecast

Timber Sales	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
Volume (mmbf)	528	565	660	546	744	657	667	667
Change	-	-	-	(122)	21	50	-	-
% Change	0%	0%	0%	-18%	3%	8%	0%	0%
Price ($/mbf)	$371	$340	$247	$170	$135	$165	$241	$301
Change	$0	$0	$0	$0	-$71	-$42	-$49	-$4
% Change	0%	0%	0%	0%	-34%	-20%	-17%	-1%
Value of Timber Sales (In millions of dollars)	**$ 196.0**	**$ 191.7**	**$ 163.0**	**$ 92.9**	**$ 100.4**	**$ 108.4**	**$ 160.7**	**$ 200.8**
Change	$ -	$ -	$ -	$ (20.5)	$ (48.2)	$ (17.3)	$ (32.5)	$ (2.4)
% Change	0%	0%	0%	-18%	-32%	-14%	-17%	-1%

Timber Removals	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
Volume (mmbf)	658	466	504	510	540	690	765	730
Change	-	-	-	(39)	(87)	35	67	(76)
% Change	0%	0%	0%	-7%	-14%	5%	10%	-9%
Price ($/mbf)	$309	$363	$311	$253	$199	$169	$163	$225
Change	$0	$0	$0	$1	-$6	-$31	-$50	-$40
% Change	0%	0%	0%	0%	-3%	-16%	-24%	-15%
Timber Revenue (In millions of dollars)	**$ 203.2**	**$ 174.7**	**$ 156.6**	**$ 129.2**	**$ 107.4**	**$ 116.3**	**$ 125.0**	**$ 164.6**
Change	$ -	$ -	$ -	$ (9.6)	$ (21.1)	$ (14.5)	$ (24.3)	$ (49.6)
% Change	0%	0%	0%	-7%	-16%	-11%	-16%	-23%

Lease Revenue	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
Agricultural and Mineral	$ 17.8	$ 24.4	$ 23.8	$ 21.2	$ 21.5	$ 22.2	$ 22.8	$ 23.5
Change	$ -	$ -	$ -	$ 0.4	$ 0.4	$ 0.4	$ 0.4	$ 0.4
% Change	0%	0%	0%	2%	2%	2%	2%	2%
Commercial	$ 8.4	$ 9.7	$ 9.2	$ 9.6	$ 9.2	$ 9.2	$ 9.2	$ 9.2
Change	$ -	$ -	$ -	$ 0.4	$ -	$ -	$ -	$ -
% Change	0%	0%	0%	4%	0%	0%	0%	0%
Aquatic Revenue	$ 19.3	$ 22.6	$ 20.4	$ 21.2	$ 20.0	$ 20.5	$ 21.1	$ 21.6
Change	$ -	$ -	$ -	$ 0.9	$ 0.6	$ 0.7	$ 0.7	$ 0.7
% Change	0%	0%	0%	4%	3%	3%	3%	3%
Total Lease Revenue	**$ 45.6**	**$ 56.7**	**$ 53.4**	**$ 52.0**	**$ 50.7**	**$ 52.0**	**$ 53.0**	**$ 54.3**
Change	$ -	$ -	$ -	$ 1.7	$ 1.0	$ 1.1	$ 1.0	$ 1.1
% Change	0%	0%	0%	3%	2%	2%	2%	2%

Total All Sources	**$ 248.7**	**$ 231.5**	**$ 210.0**	**$ 181.2**	**$ 158.1**	**$ 168.2**	**$ 178.0**	**$ 218.9**
Change	$ -	$ -	$ -	$ (7.9)	$ (20.0)	$ (13.4)	$ (23.2)	$ (48.5)
% Change	0%	0%	0%	-4%	-11%	-7%	-12%	-18%

Note: Trust land transfer is not included in distribution revenues.
This table excludes interest and Land Bank transactions, fire assessments, permits, and fees.
Totals may not add due to rounding.

Table 3.2: June 2009 Forecast by Fund (In millions of dollars)

Change from Mar. 08 Forecast at 30 %
RMCA thru FY 11

Management Funds	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
041 RMCA - Upland	$ 38.2	$ 35.2	$ 32.0	$ 26.5	$ 24.4	$ 24.7	$ 21.4	$ 29.3
Change	$ -	$ -	$ -	$ (1.5)	$ (3.5)	$ (2.8)	$ (3.7)	$ (6.4)
% Change	0%	0%	0%	-5%	-12%	-10%	-15%	-18%
041 RMCA - Aquatic	$ 8.3	$ 9.9	$ 8.6	$ 9.2	$ 8.3	$ 8.6	$ 8.8	$ 9.1
Change	$ -	$ -	$ -	$ 0.6	$ 0.3	$ 0.4	$ 0.4	$ 0.4
% Change	0%	0%	0%	7%	3%	5%	5%	5%
014 FDA	$ 22.7	$ 20.8	$ 18.6	$ 17.5	$ 13.9	$ 16.2	$ 17.8	$ 20.5
Change	$ -	$ -	$ -	$ (0.9)	$ (2.3)	$ (1.2)	$ (2.5)	$ (6.0)
% Change	0%	0%	0%	-5%	-14%	-7%	-12%	-23%
Total Management Funds	**$ 69.2**	**$ 65.9**	**$ 59.2**	**$ 53.1**	**$ 46.6**	**$ 49.5**	**$ 48.0**	**$ 58.9**
Change	$ -	$ -	$ -	$ (1.8)	$ (5.5)	$ (3.6)	$ (5.9)	$ (12.0)
% Change	0%	0%	0%	-3%	-11%	-7%	-11%	-17%

Current Funds	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
113 Common School Construction	$ 64.3	$ 56.5	$ 56.6	$ 41.1	$ 37.9	$ 39.7	$ 45.5	$ 60.9
Change	$ -	$ (0.0)	$ -	$ (1.2)	$ (6.2)	$ (5.5)	$ (7.1)	$ (12.2)
% Change	0%	0%	0%	-3%	-14%	-12%	-14%	-17%
999 Forest Board Counties	$ 72.6	$ 63.6	$ 52.5	$ 49.0	$ 37.5	$ 43.4	$ 48.3	$ 52.7
Change	$ -	$ -	$ -	$ (2.4)	$ (6.3)	$ (3.2)	$ (5.2)	$ (15.7)
% Change	0%	0%	0%	-5%	-14%	-7%	-10%	-23%
001 General Fund	$ 2.9	$ 2.9	$ 3.0	$ 1.3	$ 1.6	$ 2.1	$ 2.0	$ 2.9
Change	$ -	$ -	$ -	$ (0.2)	$ (0.2)	$ (0.1)	$ (0.8)	$ (0.8)
% Change	0%	0%	0%	-13%	-10%	-6%	-29%	-22%
348 University Bond Retirement	$ 2.3	$ 0.9	$ 2.3	$ 3.3	$ 1.9	$ 1.2	$ 0.7	$ 1.7
Change	$ -	$ -	$ -	$ (0.1)	$ (0.0)	$ 0.0	$ (0.5)	$ (0.4)
% Change	0%	0%	0%	-2%	-1%	3%	-40%	-18%
347 WSU Bond Retirement	$ 1.1	$ 1.1	$ 1.2	$ 1.1	$ 1.1	$ 1.2	$ 1.3	$ 1.3
Change	$ -	$ -	$ -	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
% Change	0%	0%	0%	2%	2%	2%	2%	2%
042 CEP&RI	$ 3.8	$ 6.7	$ 3.8	$ 4.7	$ 5.2	$ 4.5	$ 4.1	$ 6.6
Change	$ -	$ -	$ -	$ (0.7)	$ (0.3)	$ 0.1	$ (0.8)	$ (1.5)
% Change	0%	0%	0%	-13%	-6%	2%	-17%	-19%
036 Capitol Building Construction	$ 7.0	$ 6.0	$ 5.2	$ 6.4	$ 6.0	$ 5.8	$ 6.5	$ 7.5
Change	$ -	$ -	$ -	$ (0.8)	$ (0.8)	$ 0.1	$ (0.0)	$ (2.2)
% Change	0%	0%	0%	-11%	-12%	1%	0%	-23%
061/3 Normal (CWU, EWU, WWU, TESC) S	$ 0.1	$ 0.1	$ 0.1	$ 0.1	$ 0.1	$ 0.1	$ 0.1	$ 0.1
Change	$ -	$ -	$ -	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
% Change	0%	0%	0%	2%	2%	2%	2%	2%
Other Funds	$ 0.0	$ 0.5	$ 0.2	$ 0.3	$ 0.2	$ 0.3	$ 0.2	$ 0.4
Change	$ -	$ -	$ -	$ 0.1	$ (0.1)	$ (0.1)	$ (0.2)	$ (0.1)
% Change	0%	0%	0%	64%	-30%	-29%	-49%	-23%
Total Current Funds	**$ 154.2**	**$ 138.3**	**$ 125.0**	**$ 107.3**	**$ 91.6**	**$ 98.2**	**$ 108.6**	**$ 134.2**
Change	$ -	$ (0.0)	$ -	$ (5.1)	$ (13.8)	$ (8.8)	$ (14.7)	$ (32.9)
% Change	0%	0%	0%	-5%	-13%	-8%	-12%	-20%

(Continued)

Table 3.2(Continued): June 2009 Forecast by Fund (In millions of dollars)

Change from Mar. 08 Forecast at 30 %
RMCA thru FY 11

Aquatic lands Enhancement Account	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
02R	**$ 11.1**	**$ 12.7**	**$ 11.7**	**$ 12.0**	**$ 11.7**	**$ 11.9**	**$ 12.2**	**$ 12.5**
Change	$ -	$ -	$ -	$ 0.3	$ 0.4	$ 0.3	$ 0.3	$ 0.3
% Change	0%	0%	0%	3%	3%	2%	2%	2%

Permanent Funds	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
601 Agricultural College Permanent	$ 4.7	$ 4.2	$ 4.3	$ 3.1	$ 3.0	$ 3.0	$ 2.9	$ 3.3
Change	$ -	$ -	$ -	$ (0.3)	$ (0.3)	$ (0.1)	$ (0.3)	$ (1.0)
% Change	0%	0%	0%	-10%	-9%	-3%	-10%	-23%
604 Normal School Permanent	$ 3.3	$ 1.8	$ 3.1	$ 2.4	$ 2.1	$ 1.9	$ 1.8	$ 2.7
Change	$ -	$ -	$ -	$ (0.5)	$ (0.3)	$ (0.4)	$ (0.8)	$ (0.8)
% Change	0%	0%	0%	-17%	-12%	-16%	-32%	-23%
605 Common School Permanent	$ 0.3	$ 0.1	$ 0.2	$ 0.4	$ 0.4	$ 0.4	$ 0.4	$ 0.4
Change	$ -	$ -	$ -	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
% Change	0%	0%	0%	2%	2%	2%	2%	2%
606 Scientific Permanent	$ 5.6	$ 6.7	$ 6.0	$ 2.7	$ 2.6	$ 3.0	$ 3.7	$ 6.6
Change	$ -	$ -	$ -	$ (0.4)	$ (0.5)	$ (0.8)	$ (1.8)	$ (2.0)
% Change	0%	0%	0%	-12%	-16%	-21%	-33%	-23%
607 University Permanent	$ 0.5	$ 1.9	$ 0.5	$ 0.1	$ 0.1	$ 0.3	$ 0.3	$ 0.3
Change	$ -	$ -	$ -	$ 0.0	$ (0.0)	$ 0.0	$ 0.0	$ (0.1)
% Change	0%	0%	0%	4%	-19%	7%	1%	-24%
Total Permanent Funds	**$ 14.3**	**$ 14.6**	**$ 14.1**	**$ 8.7**	**$ 8.2**	**$ 8.6**	**$ 9.2**	**$ 13.4**
Change	$ -	$ -	$ -	$ (1.2)	$ (1.1)	$ (1.3)	$ (3.0)	$ (3.9)
% Change	0%	0%	0%	-12%	-12%	-13%	-24%	-22%

Total All Funds	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13
Total	**$ 248.8**	**$ 231.6**	**$ 210.0**	**$ 181.2**	**$ 158.1**	**$ 168.2**	**$ 178.0**	**$ 218.9**
Change	$ -	$ (0.0)	$ -	$ (7.9)	$ (20.0)	$ (13.4)	$ (23.2)	$ (48.5)
% Change	0%	0%	0%	-4%	-11%	-7%	-12%	-18%

Note: Trust land transfer is not included in distribution revenues.
This table excludes interest and Land Bank transactions, fire assessments, permits, and fees.
Totals may not add due to rounding.