September 8, 2003

Utah Public Service Commission
Heber M. Wells Building, 4th Floor
160 East 300 South
Salt Lake City, UT 84114

Attention: Julie P. Orchard
Commission Secretary

RE: Docket No. 99-035-10
PacifiCorp's Weather Normalization Study

Enclosed for filing are an original and eight copies of PacifiCorp's Weather Normalization Study.

The Company will also submit an electronic version of this filing to the attention of lmathie@utah.gov.

Please address all formal correspondence and staff requests regarding this matter to:

By E-mail (preferred): datarequest@pacificorp.com

By Fax: (503) 813-6060

By regular mail: Data Request Response Center
PacifiCorp
825 NE Multnomah St., Suite 800
Portland, OR 97232

Informal inquiries may be directed to John W. Stewart, Manager, Regulation at (801) 220-4561.

Very truly yours

D. Douglas Larson
Vice President, Regulation

Enclosures

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SECTION 1

Overview

The purpose of weather normalizing is to isolate the average customer's response in consumption resulting from a change in weather, within a given time period. The basic consumption of an individual changes over time due to a number of factors. That is, consumption patterns change over the hours of the day, days of the week, as well over the months or seasons of the year. For example, heating and lighting requirements increase during the winter, while in the summer there are increases in air conditioning and ventilation (cooling) as well as changes to indoor/ outdoor lighting patterns. While developing a measure for customer energy sensitivities to weather, a number of variables were evaluated which included; cloud cover, precipitation, humidity indices, wind speed, wind-chill as well as dry-bulb temperatures. In PacifiCorp's service territories, only temperatures and humidity were found to be significant.

The weather normalization of actual load removes the demand response that is not sustainable under normal conditions. That is, if the actual temperature for a given day or hour deviates from a thirty year average (industry standard for defining normal temperatures) than there is an associated demand response which under normal conditions would not occur. By removing this load response we thereby remove variability that does not reflect true load growth. For example, if temperatures are colder than normal in the winter, heating requirements will increase, therefore total demand will be higher than if temperatures were the same as a thirty year average. This increase in load if not adjusted for, would lead planners to believe that the next years load would be just as high, resulting in an over-estimation of the true growth rate in usage from one year to the next. Weather normalization models therefore, calculate the consumer impact on load due to varying temperature patterns.

Weather measurements can be defined and expressed in a numbers of terms such as, degrees, degree-days, maximums, minimums, and averages. Although degrees and degree-day specifications are related, the latter provides a more meaningful interpretation since degree-days measures the difference or deviation of actual temperatures from a defined base temperature. That is, for a given base, say 55, each degree deviation from this base has an associated customer

response in demand. In addition, degree-days also allow for independent specifications for heating loads, which are then more easily distinguished from cooling loads and thereby modeled accordingly.

SECTION 2

Current Weather Normalization Methodology: Monthly Energy Adjustments

The current model for weather normalizing is based on actual data from the metering-reading schedules as established by PacifiCorp's accounting department. The data consists of year and month identifiers, the average number of days in the actual monthly billing cycle and the average number of days in one month. The weather sensitivities are calculated at rate level aggregations to monthly totals, each based on the summation of daily average temperature deviations from normal.

A rate level analysis allows us to measure the response of customers with similar characteristics to the same weather variation. For example, customers with electric space heating load respond differently to weather variations than do non-electric space heating customers. A class level aggregation does not allow for measurement of those varying responses. A requirement for rate level analysis is that adjustments are made at operational or district levels.

The level of energy consumption is dependent on a number of factors, one of which, is the sensitivity to weather. Weather sensitivity is theoretically measuring a customer's level of environmental comfort, which is unique for each individual. The customers' individual preferences are a big influence but are difficult to measure. Others that are more measurable, are things such as type of heating, integrity of building shell, presence of hills and valleys, trees, and directional orientation of building just to list a few. Because similar building practices and heating systems are used across broad geographic areas, the possibility was raised of similar weather sensitivities for broader geographical areas than specified districts. Districts whose weather variable responses were within 2 standard deviations of each other and are within close geographical proximity are grouped together. Therefore 21 grouping from the 6 service areas were constructed solely for the purpose of developing customer weather responses. The weather

adjustments however are calculated at the district level and only rates that show any semblance of sensitivity to weather are normalized.

Model Development

In General, for any given month, our consumption model is defined in the functional form:

Consumption per customer (kWh/Customer) ~ is a function of temperatures (*TEMP*), the difference in the billing cycle days (CYCDIF), hours of daylight, household characteristics such as the number of people in a household, house occupancy rate and numerous other variables.

However, since we are only interested in the weather impacts on consumption, we need to isolate that impact from other factors influencing demand while ensuring that the impact is properly valued and not reflecting other non-temperature related demand patterns. We simplify the above relationship by combining together the factors that are not weather related. We capture all the impacts that vary every year in the same month such as holiday lighting, cooking, hours of daylight, etc. by creating a monthly indicator variable (*MODUM*). Factors such as household appliance mix, number of people in a domicile, building practices and others are combined into a district indicator variable (*DSDUM*). This simplified equation is of the form:

kWh/ Customer ~ f ($Temp_t$, $CYCDIF_t$, DSDUM, MODUM)

where t = month of interest
TEMP = measure of actual weather
CYCDIF = variation of actual length of customer billing period
DSDUM = indicator variable measuring specific district characteristics
MODUM = indicator variable in attempt to measure monthly variations

The following define the temperature spline degree-day measures in more detail:

HDDW day K = 55 - average daily temperature day K
HDDSH day K = 65 - average daily temperature day K; where 65 >= daily Temp >=55
CDDSH day K = 68 - average daily temperature day K; where 68 >= daily Temp >=65
CDDS day K = average daily temperature day K - 68

Models used for measuring weather normalization have had problems capturing weather influences during transitional periods, more specifically the defined spring and fall seasons. Some models have implied, for example, that sensitivities to cooler temperatures is the same during transitional periods as they are to temperatures in the middle of winter, however plots reveal that a different slope of sensitivities exist within differing time periods. To allow for these differing responses, we have attached a pseudo-seasonal adjustment element to degree-days. We defined separate heating degree-days for winter periods and winter-shoulder periods. We also defined separate cooling degree-days for summer and summer-shoulder periods. As evident, a negative HDD is a CDD and vice versa therefore the variables are only positively defined.

Daily temperatures are calculated by taking the simple average of that day's maximum and minimum temperature as provided by the National Weather Service. A simple summation of daily degree-day values for a calendar month provides that calendar month's measurement of actual weather variables. However, because company sales are not recorded over a calendar month, a billing cycle summation method of daily data has to be made to have weather variables for a comparable time period. The same calculations are made with daily normal temperatures, which are also provided by the National Weather Service, the deviations between these two calculations provide the basis for load adjustments for weather normalization.

All customers of the company are allocated into one of 21 metering reading or billing cycles, where each cycle is approximately 30 days long. The billing monthly algorithm consists of weighted calendar-day degree-days by an equal relative shape of customers having billed consumption that day. Degree-days for a 60-day period prior to and including the last read data of the last billing cycle of the period are used in the calculation. Weighted billing month degree-days for any month are calculated using the following formula:

Billing-month degree-days ~	1/31 *daily degree-days on Day T	+
	2/31 * daily degree-days on Day T-1	+
	:	+
	29/31* daily degree-days on Day T-28	+
	30/31* daily degree-days on Day T-29	+

30/31* daily degree-days on Day T-30 +
29/31* daily degree-days on Day T-31 +
: +
2/31 * daily degree-days on Day T-58 +
1/31 * daily degree-days on Day T-59;

Actual and normalized temperature degree-days for heating and cooling during winter, summer & shoulder seasons are estimated in this manner. The sum of the 60-day weighted daily degree-days for each month is that month's billing-month degree-days. The difference between the actual temperature and the normal temperature are included in the model to calculate the adjustments to load for weather normalization.

Daily Temperature Calculation Evaluation

The methodology used in the calculation for the daily average temperature is a vital component in the development of weather sensitivities. The current model specification defines the daily average temperature as the average of the minimum and maximum daily temperature. Hourly temperatures were not readily available at the time of the model construction, therefore this calculation provided the best approximation for the true daily average. However, with hourly data now available, the minimum/ maximum daily average has now been discovered to deviate from the true arithmetic daily average. This deviation has consequences on the weather adjustments estimated for weather normalization.

As a test case, Salt Lake City temperatures were used to compare daily average temperature calculations. The minimum/ maximum daily average was compared with the arithmetic average to determine whether the two formulas produced the same results.

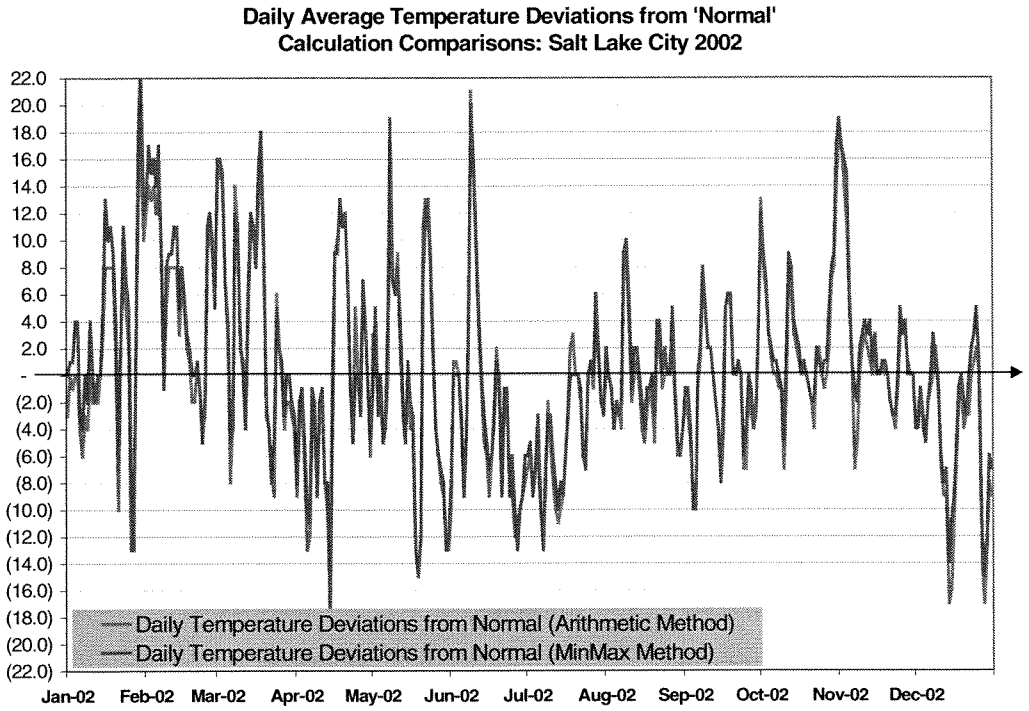
$$(MaxTmp_i - MinTmp_i)/2 \neq \sum_{k=1}^{24} HrlyTmp_i / 24$$

- *for each i = days of month/year; and k = hours of day*

The results are displayed below in graph 1, where the appearance of orange reflects the arithmetic mean deviating from the minimum/ maximum derivation. If both methods produced

the same result, the orange line would lie directly below the blue line revealing only one point for each day.

Graph 1



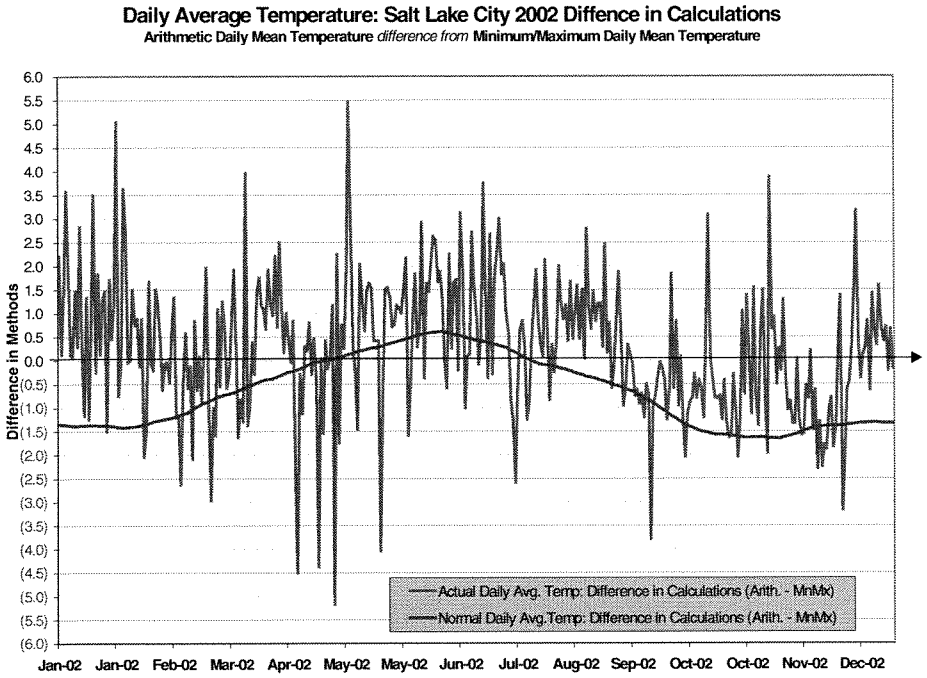
These calculation discrepancies can be displayed more prominently by using the formula below, by subtracting the minimum/maximum estimation from the true arithmetic mean.

$$(ArithmeticMean_i - MinMaxMean_i) \quad \textit{for each } i = \textit{days of month/year}$$

These results were calculated for both actuals temperatures and normal temperatures and are displayed in Graph 2 below.

If the two methods calculated the same daily average temperature then the graph would depict a zero difference, however, this does not appear to be true. Where values are greater than zero, this indicates that the minimum/ maximum method for daily averages underestimates the true daily average temperature (alternatively, for values less than zero, the minimum/ maximum method over-estimates the true daily average temperature).

Graph 2

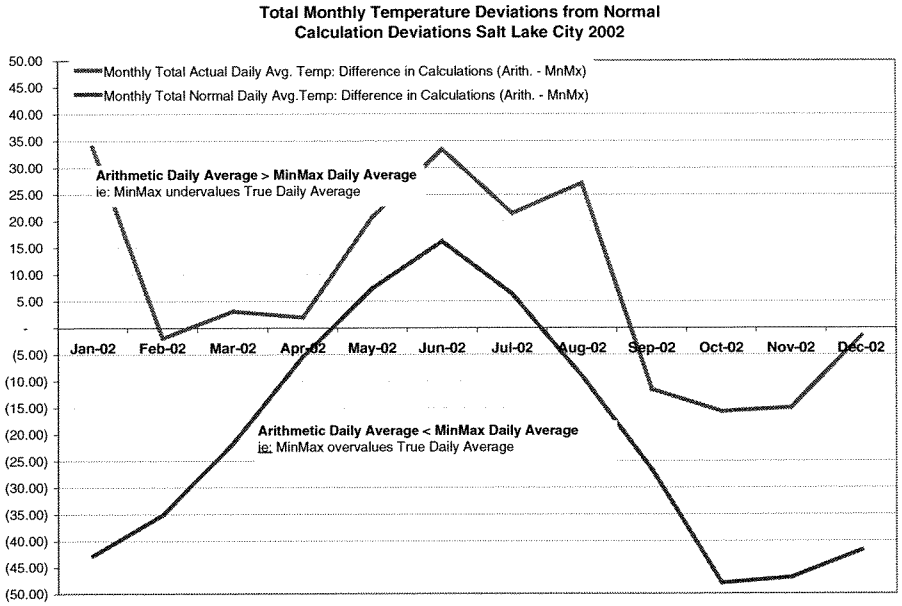


To see how these calculated differences behave over an entire month, they were aggregated for both actual temperatures and normal temperatures using the following formula;

$$\sum_{i=1}^{n}(ArithmeticMean_i - MinMaxMean_i)$$

These results are displayed in Graph 3 below. Clearly displayed are the large discrepancies between the two formulas. The results may be interpreted as in the above graph, where values greater than zero indicate that the arithmetic daily average is greater than the minimum/ maximum daily average (alternatively, the minimum/ maximum daily average under-estimating the true daily average temperature). Conversely, if the value is less than zero, then the arithmetic mean is less than the minimum/ maximum daily average (alternatively, the minimum/ maximum methodology over-estimates the true daily average temperature).

Graph 3



What is of particular interest here however, is that during January for example, the minimum/ maximum methodology under-estimates the actual daily average while over-estimating the normal daily average temperature, this is also true in March and August. These calculated differences skew the weather adjustments required to normalize loads under 'normal' weather conditions.

To see how each of these methodologies would skew weather adjustments, aggregated deviations from normal were summed over an entire month. These deviations were summed independently for both the methodologies.

$$TmpDev = \sum_{d=1}^{N} (NormalTmp - ActualTmp)$$

These results are displayed in the Table 3 below. Clearly from this we can see that over an entire month there may be significant variations between the two derivations of calculating daily average temperature deviations from normal.

Table 3

Winter & Fall

	Jan-02	Feb-02	Mar-02	Oct-02	Nov-02	Dec-02	Grand Total
Monthly ***'Total'*** Daily Temp. Deviations from Normal (MinMax Method)	110	203	131	97	97	-124	514
Monthly ***'Total'*** Daily Temp. Deviations from Normal (Arithmetic Method)	35	168	108	68	65	-165	279

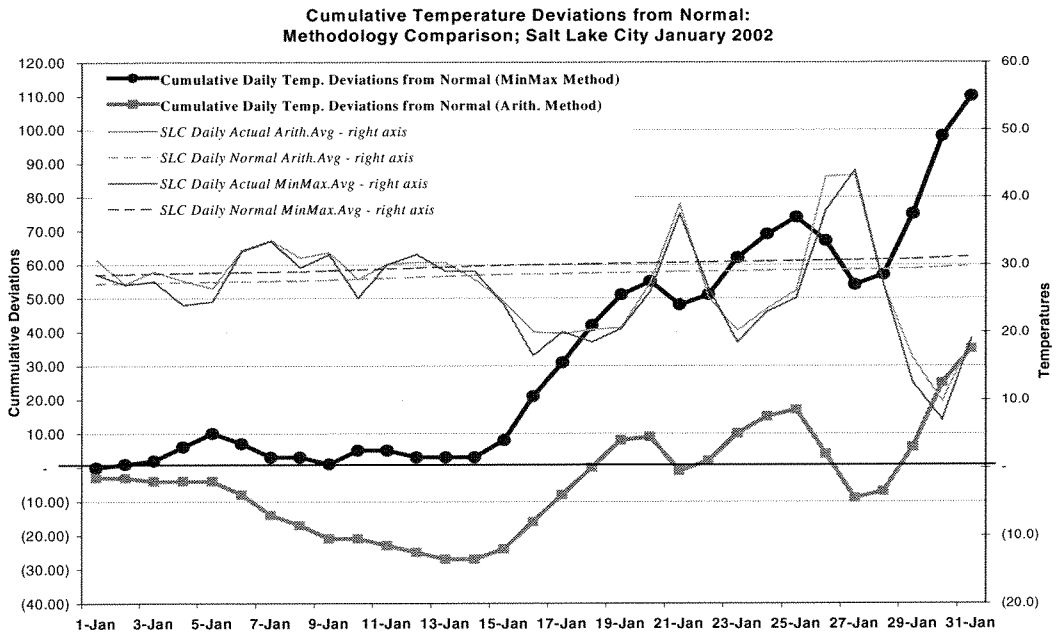
Spring & Summer

	Apr-02	May-02	Jun-02	Jul-02	Aug-02	Sep-02	Grand Total
Monthly ***'Total'*** Daily Temp. Deviations from Normal (MinMax Method)	-34	-16	-67	-126	6	-20	-257
Monthly ***'Total'*** Daily Temp. Deviations from Normal (Arithmetic Method)	-38	-29	-83	-137	-27	-31	-345

Specifically, summing the daily deviations from normal using the minimum/ maximum methodology suggests that there was an accumulation of 110-degree deviation from normal during January, while the arithmetic mean calculates only a 35-degree deviation from normal during that same month.

A closer look at January also provides insight into how working with billing cycles may further perpetuate the methodology error since billing cycles are not based on calendar months. Graph 4 below provides a cumulative representation of both actual and normal temperatures.

Graph 4



As shown by the graph above, by about mid-month, Jan. 18, 2002, the arithmetic mean calculates a net zero cumulative deviation from normal, stating that month to date actual's were not different from normal's. However, using the minimum/ maximum method would have indicated that up to this point, actual temperatures were a total of 40 degree's below normal temperatures for those 18 days, reflecting a warmer than normal month.

SECTION 3

Hourly Modeling Methodology: Overview

The recent availability of hourly net-system load data has provided an additional means of modeling and estimating variability in customer demand due to weather sensitivities. The objective of the initial modeling efforts for this 'Macro Forecasting Model' was to establish a new hourly long term, weather sensitive model that could be used to implement budgets, simulations & scenarios on an annualized basis. That is, given an annual energy projection for any given year, that annual projection or load would then be allocated, by the model, across the 8760 hours of the year. Models for hourly projections would be expected to capture all the existing and understood seasonal, monthly, and daily load shapes.

Models may include up to 250 variables, many of which are spatial parameters reflecting the daily, weekly, monthly and annual load shapes. Additional weather variables are included to capture the existing weather sensitivities within state loads. Weather adjustments in these models are made to the aggregated hourly demand for Residential, Commercial, Industrial and Irrigation loads.

Historical hourly temperatures were provided by Weather Bank for each of the regions under consideration. The hourly temperatures and humidity indices were used to calculate hourly weather splines, defined in each of the models as *Heating Degree Days & Cooling Degree Days,* allowing for hourly weather adjustments.

The hourly *Normal* temperatures were calculated using 1961 - 1995 hourly data, using *Weather Delta's* probability/simulation model[1]. Hourly *Normal* humidity splines were calculated using a simple arithmetic means with 1970 - 2000 hourly data, for each of the weather stations under consideration. New values are calculated at industry standard of every 10 years.

The temperature splines were isolated by season, using heating degree-days HDD, in winter (November – Mar), cooling degree-days CDD, in Summer (May 15 – September) and both HDDS and CDDS for both shoulder seasons (April – May 15, & October).

Initial models were to be developed for each of PacifiCorp's regional operations; PCEU, PCW, PCEW, once variable specifications were developed, models were then created for each of the seven service states; Oregon, Washington, California, Utah, Idaho, UPL Wyoming and PPL Wyoming. In addition to a list of spatial parameters/ variables under consideration for model development there were also the initially specified temperature splines described in section 2.

Variables under consideration and used (at the 90% Significance level and greater) are defined below:

Spatial Parameters/ Input Variables

Moving Average	MA – 8760 hour moving average (one year)	
Seasons	S1 – winter: Nov 1 - Mar 30	
	S2 – summer: May 15 - Sept 30	- default fall/spring (Apr-May15, Oct)
Months of Year	M1 – M3; M5 – M9; M11 – M12	- M4 & M10 default months
Weeks of the Year	WY1 – WY52	- WY53 is default week
Days of the Week	D1 (Sun) – D6 (Fri)	- D7 is default day
Weekend & Holiday	WE (Sat & Sun & Holidays)	
Hours of the Day	H1 – H23	- H24 default hour
Sunlight Minutes	(per day)	

"Normal Temperature" and "Temperature Bounds" are statistical quantities that the weather engine uses to represent the mean and unconditional standard deviations of hourly temperature. The "Raw Mean Temp" is a simple average of the temperature for that particular hour of the year, across the historical data from 1961-1995 (this will be updated to 1961-2000 with the next major release). This differs from the "Normal Temperature" used by the weather engine, as the latter has been smoothed across time of day and time of the year using neighboring observations.

WeatherDelta provides a ground up approach to value at risk for energy companies by exploiting weather as the main driving source of uncertainty. WeatherDelta accurately quantifies multi-regional price and load distributions, captures the huge volatility of hourly spot prices, and pins down the relationship between hourly spot prices and loads.

WeatherDelta uses a built-in Weather Engine to simulate thousands of hourly multi-regional weather paths for any areas of interest, fully accounting for the complex statistical patterns observed in historical data.

Cross Products (only those 90% significant and greater were left in model):

Month & Hours of Day
Day of Week & Hours of day
Seasons and Hours of day
Weekend and Hours of day
Spring Weeks & Hours of day

Temperature Splines Model Definitions; Hourly Degree measures

CDD	65 <=	Hourly Temperature
HDD		Hourly Temperature <= 55
HDDS	55 <	Hourly Temperature <= 58
CDDS	58 <	Hourly Temperature < 65
HCDD Humidity	<= 50	(interaction only with S2 – summer: S2*HCDD)

PCW Models (including Oregon, California & Washington)

The initial exploratory process for developing a model for PCW was to use graphical techniques applied to the 1996 – 1999 data to determine the changing nature of load shapes across seasons, months, weeks, days, and hours of the day. In addition, Medford Oregon weather variables were plotted against loads to determine those variable effects on loads via seasons and/or weeks of the year. In most cases, weather variables were not linearly related to load so splines were developed to capture the linear portions of weather variable effects.

Trial models using indicator variables for years, weeks of year, days of week, and hours of the day together with various combinations of weather variables were run on a combined four year data set (1996, 1997, 1998 & 1999). Models were also run without year's indicators and on each base year separately. Model diagnostics included Adj. R-Square, model residuals, and consistency of coefficients run to run.

PCW

Model Fit

R-Squared	Residuals		Absolute Error		Absolute Percentage Error	
0.905	Mean	StDev	Mean	StDev	Mean	StDev
	0.00	126	99	78	4.36	3.52

Each model was then used to forecast the year 2000 given year 2000 actual total annual load. Forecast residuals were then analyzed, noting R-Squared = .905 also the mean absolute error (MAE) = 99 and the mean absolute percentage error (MAPE) = 4.36.

PCEU Models (including Utah, Idaho & UPL Wyoming)

The process for developing a long-term forecast model for PCEU followed the same procedures as for PCW. Ultimately after considerable exploration with Salt Lake City, Utah weather variables, hourly, weekly, daily indicator variables, and combinations of variable interactions, the same model variables were used for PCEU as for PCW. There were minor differences in variables fit but not sufficient to reconstruct a different model. Load growth was more pronounced in PCEU over the forecast period 2000 than for PCW. Again models attempted included: separate models for given years, models with indicators for years, model with no year indicators (model A) and a normalized model (model B).

Residual analysis showed hourly load data to have greater variation in PCEU than in PCW particularly during the summer months. This variation may be related to periods of irrigation. Some effort was made to select other monthly groups for seasonal variables, S1 & S2 as described early for PCW but again without significant change in model characteristics. Model A fit quality was again quite good with an Adj.R-Squared of 0.917, MAE=88 and MAPE = 4.06.

PCEU

Model Fit

R-Squared	Residuals		Absolute Error		Absolute Percentage Error	
0.917	Mean	StDev	Mean	StDev	Mean	StDev
	0.00	112	88	70	4.06	2.99

To reflect load growth in the year 2000 – the forecast hourly load was normalized to year 2000 as with PCW model A construction. Model coefficients were applied to year PCEU 2000 design matrix generating forecast load for each hour of the year. Those hourly forecasts were then multiplied by the ratio of the total year 2000 load divided by the total model forecast load.

Again the net effect was to retain forecast load shape but to adjust to year 2000 loads as the sum of the adjusted loads would now total year 2000 load.

PCEW Models (including PPL Wyoming)

Developing forecasting model for PCEW was the most difficult of the three regions. This was due largely to the great variability of data within the database years with a significant portion of the total load reflecting industrial load. Data tended to show sudden or unexpected load changes. In particular, weekend loads exceeded weekday loads during certain periods of time.

The same model construction procedures were applied to PCEW with Casper, Wyoming weather variables used as the base weather variables for model construction and fits. Once again no other weather variables other than temperature and humidity added further to the model based upon variables as in model construction for PCW and PCEU.

Model A construction again utilized the same variables as for PCW & PCEU. Model fit had lesser quality fit characteristics with Adj.R-Squared at only .626, MAE =27, and MAPE = 3.76 which is the largest of three areas.

PCEW

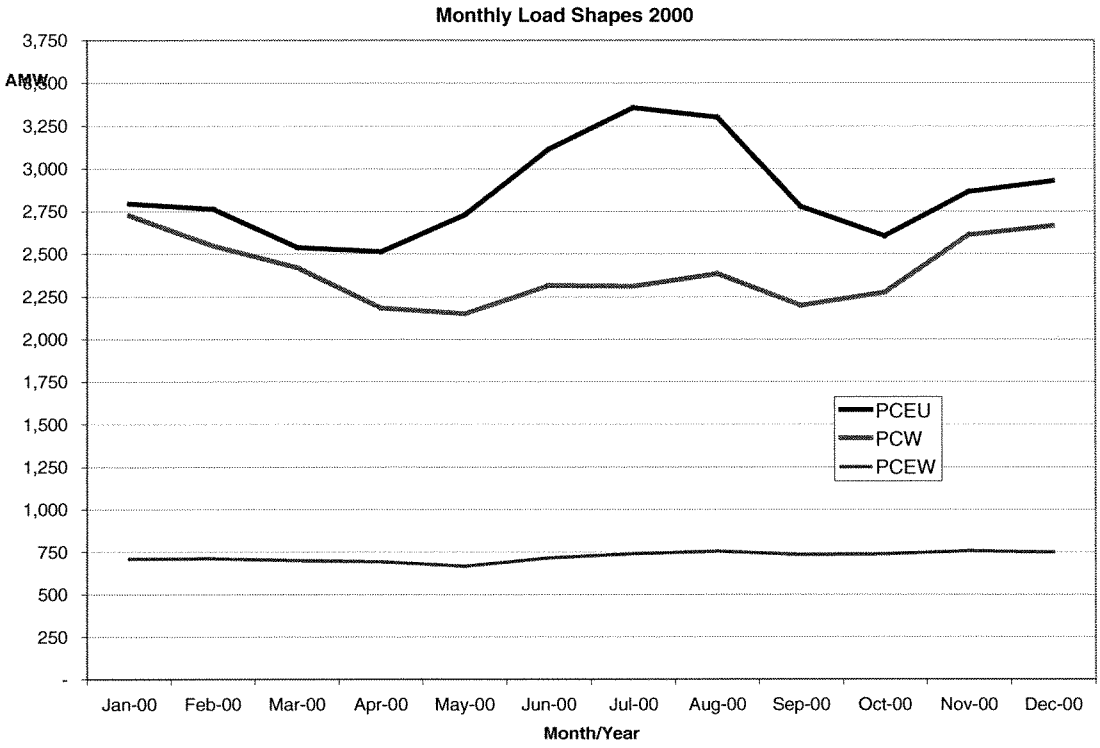
Model Fit

R-Squared	Residuals		Absolute Error		Absolute Percentage Error	
0.626	Mean	StDev	Mean	StDev	Mean	StDev
	0.00	35	27	22	3.76	3.24

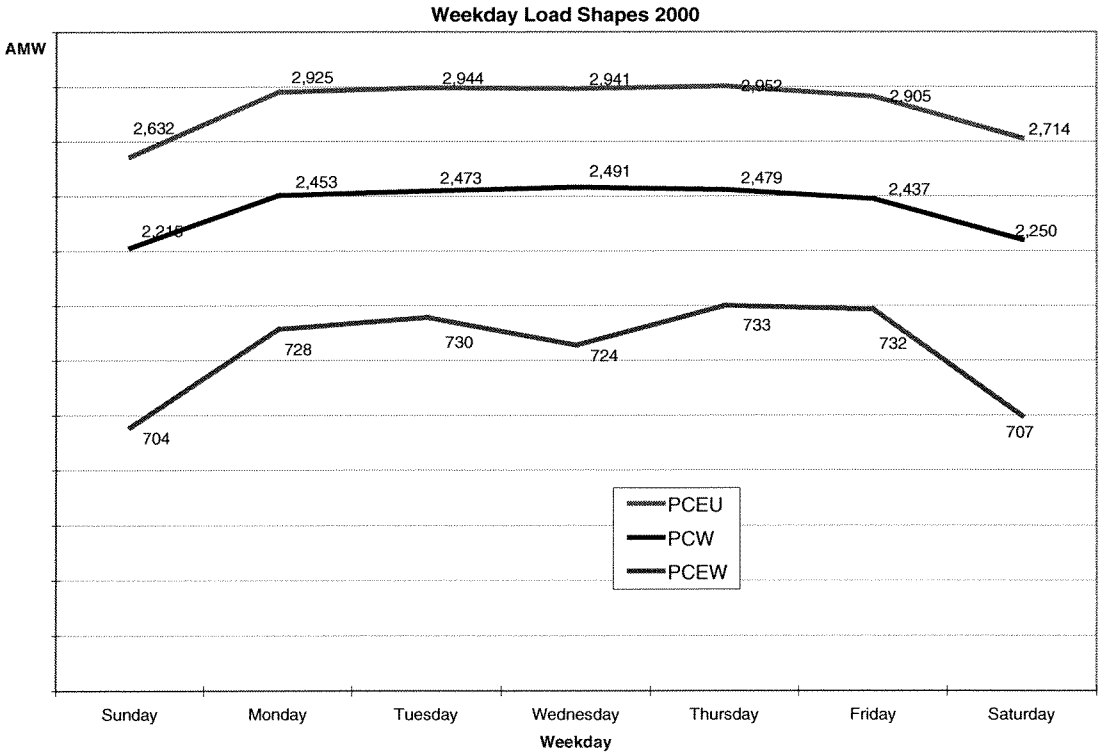
No attempts were made to smooth or delete any data points either in model construction or fit. This was also the case in PCW & PCEU model construction & forecasts.

Month, Day of Week and Seasonal actual hourly loads shapes are presented below for each of the three regions for the test year 2000.

Graph 5 - a



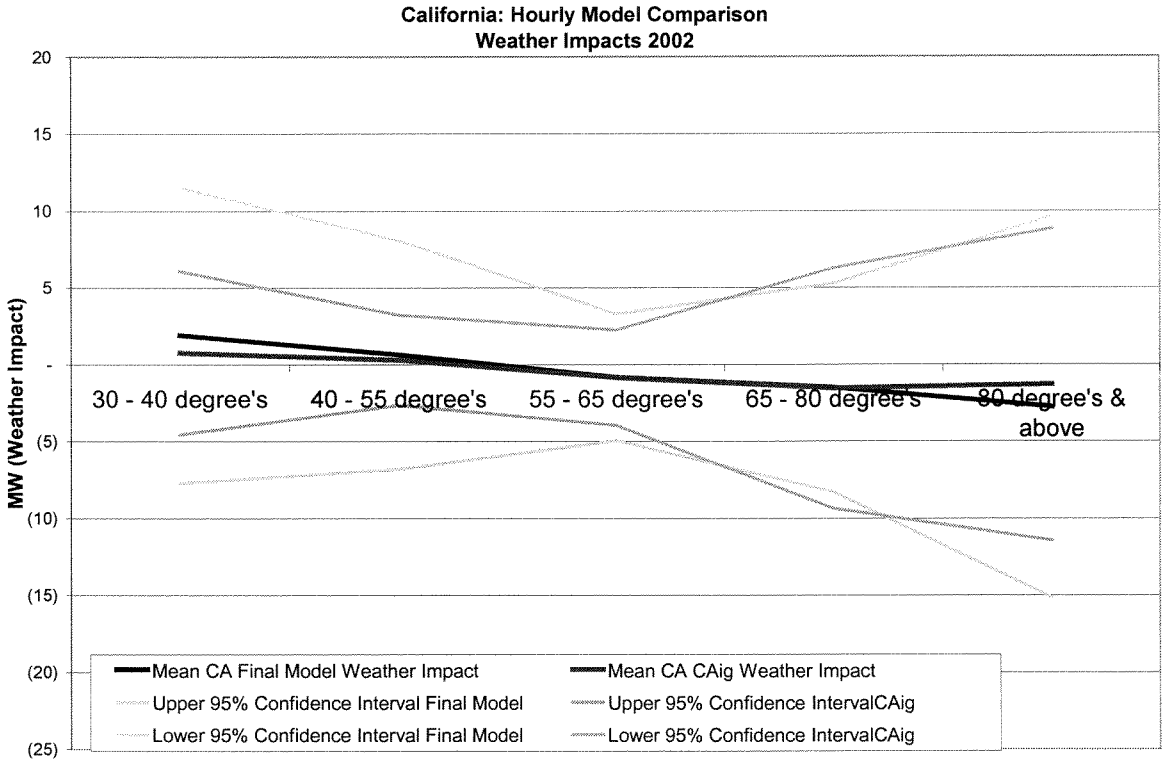
Graph 5 - b

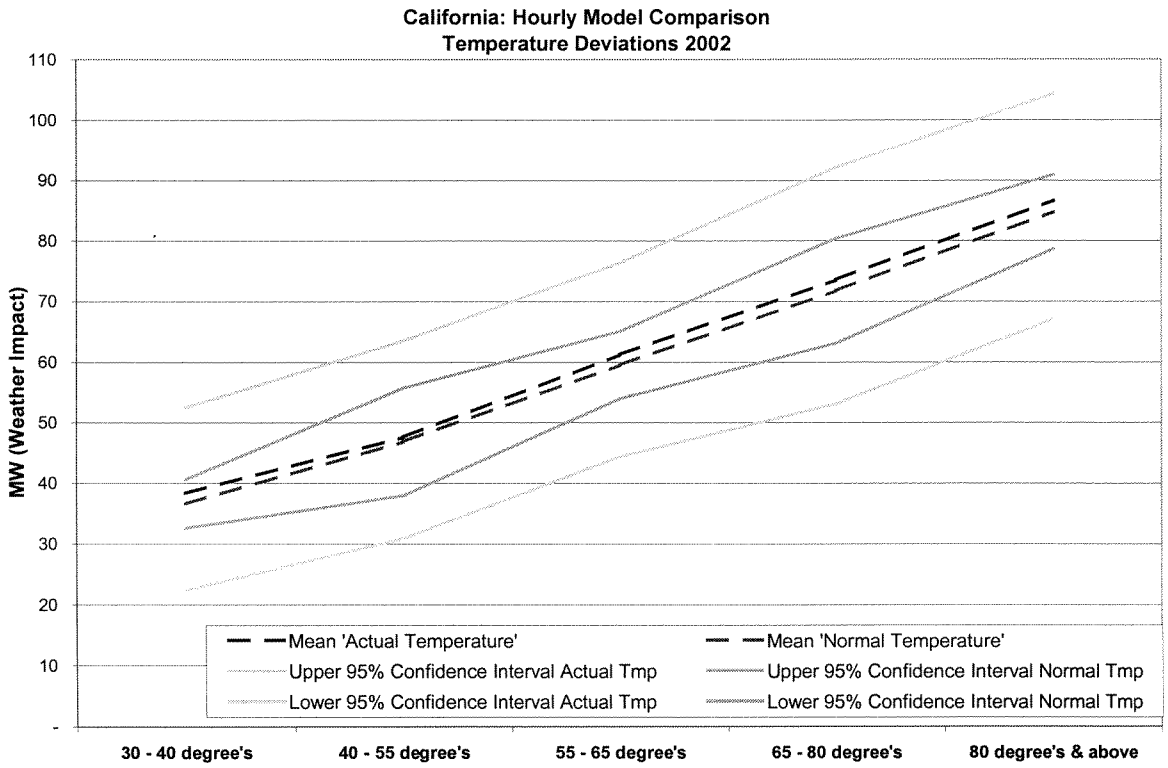


CALIFORNIA APPENDIX

California Appendix

Weather Impacts for each of the hourly models





Model Statistics by Month, Hour & Day of Week

California Model Statistics

Month of Year	*Final Model*	*Original Model*	*Final Model*	*Original Model*	*Final Model*	*Original Model*
2002 Stats	Mean Calibrated Estimate % Error	Mean Calibrated % Error	Mean Calibrated ABS % Error	Mean ABS Calibrated % Error	Sum Tmp Impact	Sum Weather Impact
Jan	0.4%	0.2%	5.9%	7.0%	758,029	322,426
Feb	-4.3%	-7.6%	7.5%	8.9%	1,449,133	394,480
Mar	1.3%	1.8%	4.4%	8.2%	(514,321)	17,215
Apr	6.8%	5.8%	9.0%	8.3%	(46,811)	(78,209)
May	0.9%	0.3%	6.4%	6.0%	(130,668)	(359,196)
Jun	3.8%	3.3%	7.6%	7.3%	(809,188)	(903,588)
Jul	1.1%	0.0%	7.1%	7.0%	(1,844,938)	(1,554,522)
Aug	-0.7%	-1.2%	5.1%	5.3%	(656,832)	(475,216)
Sep	-0.4%	-0.9%	4.9%	5.2%	(746,804)	(722,327)
Oct	-0.9%	0.7%	4.4%	5.8%	(785,715)	(34,137)
Nov	-6.1%	-8.2%	8.1%	9.6%	1,753,260	348,228
Dec	-0.4%	-1.9%	7.0%	6.0%	2,250,229	1,091,732
Grand Total	0.1%	-0.6%	6.4%	7.0%	675,373	(1,953,114)

Hours of Day	*Final Model*	*Original Model*	*Final Model*	*Original Model*	*Final Model*	*Original Model*
2002 Stats	Mean Calibrated Estimate % Error	Mean Calibrated % Error	Mean Calibrated ABS % Error	Mean ABS Calibrated % Error	Sum Tmp Impact	Sum Weather Impact
HR1	-2.0%	1.3%	6.2%	7.0%	175,664	2,375
HR2	2.2%	1.6%	6.1%	7.2%	175,737	19,864
HR3	2.1%	1.5%	6.1%	7.5%	179,576	18,287
HR4	2.0%	1.5%	6.3%	7.5%	169,819	36,962
HR5	1.0%	1.8%	5.8%	7.1%	67,493	64,025
HR6	1.3%	0.8%	5.7%	6.8%	84,877	73,538
HR7	0.3%	-0.4%	6.8%	7.7%	104,207	6,310
HR8	-0.2%	-0.9%	6.3%	7.0%	143,834	(94,394)
HR9	-0.7%	-1.3%	5.9%	6.5%	82,394	(192,822)
HR10	-0.7%	-1.4%	6.1%	6.6%	53,313	(261,949)
HR11	-0.6%	-1.5%	6.3%	6.7%	5,642	(300,903)
HR12	-0.7%	-1.7%	6.6%	7.1%	(60,597)	(300,203)
HR13	-0.6%	-1.6%	7.1%	7.6%	(142,584)	(293,087)
HR14	-0.8%	-1.7%	7.1%	7.6%	(227,679)	(293,895)
HR15	-0.8%	-1.8%	7.3%	7.9%	(254,166)	(253,310)
HR16	-0.8%	-1.8%	7.2%	7.7%	(292,541)	(226,351)
HR17	-0.8%	-1.9%	7.2%	7.7%	(223,129)	(109,510)
HR18	-0.7%	-1.8%	6.9%	7.8%	(89,345)	17,192
HR19	-0.5%	-1.3%	6.2%	6.6%	39,150	135,465
HR20	-0.6%	-1.3%	6.2%	6.4%	65,507	104,780
HR21	-0.6%	-1.3%	5.9%	6.3%	166,313	15,584
HR22	-0.5%	-1.2%	5.7%	6.3%	145,438	(39,907)
HR23	0.1%	-0.4%	5.7%	6.2%	149,607	(50,042)
HR24	6.0%	0.7%	7.7%	6.3%	156,843	(31,124)
Grand Total	0.1%	-0.6%	6.4%	7.0%	675,373	(1,953,114)

Day of Week	*Final Model*	*Original Model*	*Final Model*	*Original Model*	*Final Model*	*Original Model*
2002 Stats	Mean Calibrated Estimate % Error	Mean Calibrated % Error	Mean Calibrated ABS % Error	Mean ABS Calibrated % Error	Sum Tmp Impact	Sum Weather Impact
Sun	-0.7%	-1.3%	6.2%	7.1%	320,869	46,230
Mon	0.3%	-0.5%	6.9%	7.2%	273,280	(77,692)
Tue	0.3%	-0.3%	6.2%	6.6%	(93,254)	(389,154)
Wed	-0.4%	-1.0%	5.7%	6.7%	(172,266)	(622,016)
Thu	1.1%	0.3%	6.6%	7.0%	(42,927)	(472,994)
Fri	0.9%	0.0%	6.8%	7.3%	264,302	(168,331)
Sat	-0.4%	-1.4%	6.8%	7.5%	125,371	(269,157)
Grand Total	0.1%	-0.6%	6.4%	7.0%	675,373	(1,953,114)

California *Original* Hourly Splines & Variables

The REG Procedure
Model: MODEL1
Dependent Variable: CA

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	178	1.113198E13	62539212332	663.57	<.0001
Error	26125	2.462182E12	94246189		
Corrected Total	26303	1.359416E13			

Root MSE	9708.04762	R-Square	0.8189
Dependent Mean	102653	Adj R-Sq	0.8176
Coeff Var	9.45710		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-13019	5229.76763	-2.49	0.0128
MFR_SUN	1	133.06106	8.77547	15.16	<.0001
CA_MA	1	0.23990	0.00593	40.48	<.0001
MFR_HDD	1	399.97250	15.98217	25.03	<.0001
MFR_CDDS	1	-241.78146	51.63942	-4.68	<.0001
MFR_CDD	1	569.44633	20.16619	28.24	<.0001
MFR_S2_HCDD	1	69.99087	25.28891	2.77	0.0057
S_1	1	-7655.03115	952.67050	-8.04	<.0001
S_2	1	10125	1081.54345	9.36	<.0001
H1	1	-8045.19893	958.09595	-8.40	<.0001
H2	1	-10866	958.10358	-11.34	<.0001
H3	1	-12289	958.26498	-12.82	<.0001
H4	1	-13078	958.24160	-13.65	<.0001
H5	1	-11806	958.79785	-12.31	<.0001
H6	1	-3439.10819	958.41557	-3.59	0.0003
H7	1	15746	958.47722	16.43	<.0001
H8	1	29448	958.08788	30.74	<.0001
H9	1	28961	958.17118	30.23	<.0001
H10	1	27727	959.02219	28.91	<.0001
H11	1	25597	962.18869	26.60	<.0001
H12	1	23354	968.42077	24.12	<.0001
H13	1	20694	976.63755	21.19	<.0001
H14	1	18387	985.69570	18.65	<.0001
H15	1	16472	991.20281	16.62	<.0001
H16	1	15052	992.36915	15.17	<.0001
H17	1	15570	993.83995	15.67	<.0001
H18	1	17687	984.67244	17.96	<.0001
H19	1	21210	971.79366	21.83	<.0001
H20	1	24373	965.56813	25.24	<.0001
H21	1	26933	959.29510	28.08	<.0001
H22	1	22900	958.42841	23.89	<.0001
H23	1	11697	958.13585	12.21	<.0001
S_1_H1	1	578.22636	1064.76157	0.54	0.5871

S_1_H2	1	708.10641	1064.80930	0.67	0.5061
S_1_H3	1	1681.61410	1065.04019	1.58	0.1144
S_1_H4	1	2277.49825	1064.90780	2.14	0.0325
S_1_H5	1	4387.22889	1065.44409	4.12	<.0001
S_1_H6	1	7968.22813	1065.22767	7.48	<.0001
S_1_H7	1	13817	1065.23130	12.97	<.0001
S_1_H8	1	16542	1064.96526	15.53	<.0001
S_1_H9	1	14863	1064.84805	13.96	<.0001
S_1_H10	1	12097	1065.55580	11.35	<.0001
S_1_H11	1	10231	1068.75364	9.57	<.0001
S_1_H12	1	8785.50180	1075.01303	8.17	<.0001
S_1_H13	1	8379.41418	1083.10430	7.74	<.0001
S_1_H14	1	7619.79102	1091.84870	6.98	<.0001
S_1_H15	1	7154.21355	1097.33551	6.52	<.0001
S_1_H16	1	7442.14132	1098.20077	6.78	<.0001
S_1_H17	1	10873	1107.04116	9.82	<.0001
S_1_H18	1	18069	1097.67829	16.46	<.0001
S_1_H19	1	19953	1085.78896	18.38	<.0001
S_1_H20	1	15356	1076.99780	14.26	<.0001
S_1_H21	1	7339.32245	1066.07024	6.88	<.0001
S_1_H22	1	2788.80142	1065.13482	2.62	0.0088
S_1_H23	1	-414.20353	1064.79735	-0.39	0.6973
S_2_H1	1	15.59716	1282.58963	0.01	0.9903
S_2_H2	1	-614.18812	1282.87320	-0.48	0.6321
S_2_H3	1	-1637.34017	1283.35395	-1.28	0.2020
S_2_H4	1	-2483.04707	1283.23919	-1.93	0.0530
S_2_H5	1	-2699.01005	1283.68048	-2.10	0.0355
S_2_H6	1	-5697.49841	1283.54032	-4.44	<.0001
S_2_H7	1	-13709	1283.74161	-10.68	<.0001
S_2_H8	1	-15893	1282.45667	-12.39	<.0001
S_2_H9	1	-11296	1282.36926	-8.81	<.0001
S_2_H10	1	-8029.48503	1285.48218	-6.25	<.0001
S_2_H11	1	-5918.26520	1297.32235	-4.56	<.0001
S_2_H12	1	-4663.06839	1321.98047	-3.53	0.0004
S_2_H13	1	-3613.44908	1351.39306	-2.67	0.0075
S_2_H14	1	-2861.06314	1376.05875	-2.08	0.0376
S_2_H15	1	-1905.38018	1389.59789	-1.37	0.1703
S_2_H16	1	-1990.70228	1393.24860	-1.43	0.1531
S_2_H17	1	-1868.85531	1386.12079	-1.35	0.1776
S_2_H18	1	-2991.83893	1363.78976	-2.19	0.0283
S_2_H19	1	-4166.32237	1335.76008	-3.12	0.0018
S_2_H20	1	-5246.93012	1308.29545	-4.01	<.0001
S_2_H21	1	-5008.89999	1291.09398	-3.88	0.0001
S_2_H22	1	-1382.98837	1284.51524	-1.08	0.2816
S_2_H23	1	-246.36268	1282.46490	-0.19	0.8477
D1	1	-4695.30645	224.29924	-20.93	<.0001
D2	1	-3258.22837	467.30259	-6.97	<.0001
D3	1	-2609.56855	482.09442	-5.41	<.0001
D4	1	-2808.51856	487.02167	-5.77	<.0001
D5	1	-2558.44974	479.49252	-5.34	<.0001
D6	1	-2974.76735	482.11103	-6.17	<.0001
WE	1	-4261.66181	760.16468	-5.61	<.0001
WE_H1	1	3909.19203	897.30278	4.36	<.0001
WE_H2	1	3433.27542	897.30987	3.83	0.0001
WE_H3	1	2655.92745	897.77377	2.96	0.0031
WE_H4	1	2381.84636	896.85140	2.66	0.0079
WE_H5	1	637.39565	897.30623	0.71	0.4775
WE_H6	1	-4738.34541	897.31450	-5.28	<.0001
WE_H7	1	-18539	897.34891	-20.66	<.0001

WE_H8	1	-21860	897.30090	-24.36	<.0001
WE_H9	1	-11490	897.31006	-12.80	<.0001
WE_H10	1	-4781.01702	897.33077	-5.33	<.0001
WE_H11	1	-3489.21573	897.33963	-3.89	0.0001
WE_H12	1	-4088.92126	897.32915	-4.56	<.0001
WE_H13	1	-4961.89683	897.36621	-5.53	<.0001
WE_H14	1	-6179.86637	897.38888	-6.89	<.0001
WE_H15	1	-6283.44498	897.35619	-7.00	<.0001
WE_H16	1	-6182.28587	897.33972	-6.89	<.0001
WE_H17	1	-5128.74931	897.41013	-5.72	<.0001
WE_H18	1	-4803.07303	897.40213	-5.35	<.0001
WE_H19	1	-5977.00536	897.41909	-6.66	<.0001
WE_H20	1	-6183.03352	897.39667	-6.89	<.0001
WE_H21	1	-5265.74195	897.33331	-5.87	<.0001
WE_H22	1	-4543.64796	897.31890	-5.06	<.0001
WE_H23	1	-1778.70838	897.32308	-1.98	0.0475
WY1	1	4187.77532	800.03844	5.23	<.0001
WY2	1	9595.10650	709.77909	13.52	<.0001
WY3	1	9075.66338	724.00749	12.54	<.0001
WY4	1	2242.96906	757.09738	2.96	0.0031
WY5	1	460.23635	813.42423	0.57	0.5715
WY6	1	-3037.13070	896.65681	-3.39	0.0007
WY7	1	-8427.62367	1001.56011	-8.41	<.0001
WY8	1	-12183	1124.91129	-10.83	<.0001
WY9	1	-16186	1267.44214	-12.77	<.0001
WY10	1	-18229	1436.50915	-12.69	<.0001
WY11	1	-20240	1593.46345	-12.70	<.0001
WY12	1	-28747	1751.04930	-16.42	<.0001
WY13	1	-34004	1911.30513	-17.79	<.0001
WY14	1	-32194	2081.11245	-15.47	<.0001
WY15	1	-31405	2245.35854	-13.99	<.0001
WY16	1	-32616	2403.45531	-13.57	<.0001
WY17	1	-33628	2559.98108	-13.14	<.0001
WY18	1	-36329	2671.18703	-13.60	<.0001
WY19	1	-38052	2785.77128	-13.66	<.0001
WY20	1	-33773	2912.97913	-11.59	<.0001
WY21	1	-35824	3023.57278	-11.85	<.0001
WY22	1	-30857	3118.35117	-9.90	<.0001
WY23	1	-33949	3190.97180	-10.64	<.0001
WY24	1	-37538	3231.86716	-11.61	<.0001
WY25	1	-32789	3245.63659	-10.10	<.0001
WY26	1	-31502	3245.47771	-9.71	<.0001
WY27	1	-26565	3219.13932	-8.25	<.0001
WY28	1	-35922	3162.02432	-11.36	<.0001
WY29	1	-32577	3083.67393	-10.56	<.0001
WY30	1	-37460	2988.39067	-12.54	<.0001
WY31	1	-32926	2872.76507	-11.46	<.0001
WY32	1	-25440	2749.40229	-9.25	<.0001
WY33	1	-21359	2620.24084	-8.15	<.0001
WY34	1	-21132	2477.62072	-8.53	<.0001
WY35	1	-23561	2328.73613	-10.12	<.0001
WY36	1	-23985	2157.86489	-11.12	<.0001
WY37	1	-29055	2013.36358	-14.43	<.0001
WY38	1	-29361	1862.97745	-15.76	<.0001
WY39	1	-25864	1715.83778	-15.07	<.0001
WY40	1	-25816	1541.80108	-16.74	<.0001
WY41	1	-23432	1419.37475	-16.51	<.0001
WY42	1	-23810	1276.49659	-18.65	<.0001
WY43	1	-19673	1145.20911	-17.18	<.0001

WY44	1	-12003	1019.18769	-11.78	<.0001
WY45	1	-10562	903.66929	-11.69	<.0001
WY46	1	-7383.22433	821.14023	-8.99	<.0001
WY47	1	-2329.78362	756.88841	-3.08	0.0021
WY48	1	-1551.32731	727.68043	-2.13	0.0330
WY49	1	-300.70672	705.87174	-0.43	0.6701
WY50	1	2126.39274	701.77510	3.03	0.0024
WY51	1	8789.29362	702.87865	12.50	<.0001
WY52	1	6857.45274	703.60280	9.75	<.0001
H17_WY14	1	-6646.47926	2210.82764	-3.01	0.0026
H17_WY15	1	-5052.64958	2213.49673	-2.28	0.0225
H17_WY16	1	-4234.84528	2213.42764	-1.91	0.0557
H17_WY17	1	-1554.42967	2213.26153	-0.70	0.4825
H18_WY14	1	-12400	2210.36813	-5.61	<.0001
H18_WY15	1	-13207	2213.12439	-5.97	<.0001
H18_WY16	1	-11758	2213.15280	-5.31	<.0001
H18_WY17	1	-12668	2212.73450	-5.72	<.0001
H19_WY14	1	-11620	2210.05574	-5.26	<.0001
H19_WY15	1	-14059	2212.71390	-6.35	<.0001
H19_WY16	1	-14371	2212.46652	-6.50	<.0001
H19_WY17	1	-14311	2212.46499	-6.47	<.0001
H17_WY18	1	-6997.61024	2204.34192	-3.17	0.0015
H18_WY18	1	-11808	2204.11415	-5.36	<.0001
H19_WY18	1	-12960	2204.14468	-5.88	<.0001
H20_WY15	1	-8709.11825	2211.01881	-3.94	<.0001
H20_WY16	1	-10272	2210.84510	-4.65	<.0001
H20_WY17	1	-9860.08700	2210.86387	-4.46	<.0001
H20_WY18	1	-10666	2203.24080	-4.84	<.0001

California *Final* Hourly Splines & Variables

The REG Procedure
Model: MODEL1
Dependent Variable: CA

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	232	1.136243E13	48975998074	572.14	<.0001
Error	26071	2.23173E12	85602007		
Corrected Total	26303	1.359416E13			

Root MSE	9252.13526	R-Square	0.8358
Dependent Mean	102653	Adj R-Sq	0.8344
Coeff Var	9.01298		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-16935	3194.50740	-5.30	<.0001
CA_MA	1	0.21221	0.00561	37.81	<.0001
MFR_SUN	1	83.90321	4.15037	20.22	<.0001
Day_MFR_Min	1	98.67837	20.16147	4.89	<.0001
MFR_CDD85Pl	1	269.48420	60.22720	4.47	<.0001
lag3MFR_CDD85Pl	1	349.28199	53.81948	6.49	<.0001
MFR_CDD65Pl	1	370.91141	21.29389	17.42	<.0001
LagDay_MFR_Max	1	-296.86935	15.91678	-18.65	<.0001
MFR_HDD57Le	1	463.68703	15.28900	30.33	<.0001
MFR_S2_HCDD	1	94.19778	23.61194	3.99	<.0001
S_1	1	8256.95275	1463.06417	5.64	<.0001
S_2	1	5439.07618	836.19879	6.50	<.0001
M1	1	26795	1652.35969	16.22	<.0001
M2	1	12405	1496.26878	8.29	<.0001
M3	1	14192	1388.91505	10.22	<.0001
M5	1	12180	1142.08277	10.66	<.0001
M6	1	18542	1106.36083	16.76	<.0001
M7	1	8878.74383	1052.54731	8.44	<.0001
M8	1	6264.65016	1024.71185	6.11	<.0001
M10	1	-8064.42000	1228.23261	-6.57	<.0001
M11	1	11379	1742.51446	6.53	<.0001
M12	1	17063	1709.33177	9.98	<.0001
D2	1	3161.37694	485.93737	6.51	<.0001
D3	1	2231.35518	477.34139	4.67	<.0001
D4	1	4038.03231	516.11709	7.82	<.0001
D5	1	3745.49696	589.35525	6.36	<.0001
D6	1	3588.70750	590.50234	6.08	<.0001
D7	1	4795.80152	414.10569	11.58	<.0001
D2_S1	1	-1898.71604	395.01676	-4.81	<.0001
D4_S1	1	-2508.60070	394.99220	-6.35	<.0001
D5_S1	1	-2260.48635	468.14813	-4.83	<.0001
D6_S1	1	-2668.30136	471.82729	-5.66	<.0001
D7_S1	1	-1538.80303	475.17134	-3.24	0.0012

D3_S2	1	2178.27870	458.60704	4.75	<.0001
D5_S2	1	2161.91004	540.10393	4.00	<.0001
D6_S2	1	2376.75166	539.51355	4.41	<.0001
D7_S2	1	3770.69034	547.19018	6.89	<.0001
H2	1	-6213.69074	337.47492	-18.41	<.0001
H3	1	-7130.86397	373.31447	-19.10	<.0001
H4	1	-7714.23722	373.45231	-20.66	<.0001
H7	1	15164	1488.74977	10.19	<.0001
H8	1	28554	1488.75107	19.18	<.0001
H9	1	30441	1489.04197	20.44	<.0001
H10	1	29894	1490.05940	20.06	<.0001
H11	1	26666	682.02003	39.10	<.0001
H12	1	29016	899.14394	32.27	<.0001
H13	1	27744	725.34920	38.25	<.0001
H14	1	25680	735.57561	34.91	<.0001
H15	1	23862	741.53588	32.18	<.0001
H16	1	22333	741.41036	30.12	<.0001
H17	1	22332	737.30019	30.29	<.0001
H18	1	23878	729.19034	32.75	<.0001
H19	1	22539	740.60639	30.43	<.0001
H20	1	24140	711.45317	33.93	<.0001
H21	1	28000	667.41380	41.95	<.0001
H22	1	27752	531.31095	52.23	<.0001
H23	1	16458	403.64916	40.77	<.0001
M3_H8	1	-3697.45298	1176.46564	-3.14	0.0017
M3_H9	1	-6223.85480	1177.02137	-5.29	<.0001
M3_H10	1	-8795.61400	1177.66684	-7.47	<.0001
M3_H11	1	-9195.27609	1178.23626	-7.80	<.0001
M3_H12	1	-9672.18680	1178.38398	-8.21	<.0001
M3_H13	1	-8849.62715	1178.15391	-7.51	<.0001
M3_H14	1	-7579.29423	1119.67869	-6.77	<.0001
M3_H15	1	-7660.11320	1119.46074	-6.84	<.0001
M3_H16	1	-7935.91014	1141.04365	-6.95	<.0001
M3_H17	1	-11459	1141.56718	-10.04	<.0001
M3_H18	1	-18205	1142.13668	-15.94	<.0001
M3_H19	1	-12542	1178.45080	-10.64	<.0001
M3_H20	1	-6986.29013	1178.19441	-5.93	<.0001
M3_H21	1	-6254.09029	1177.75807	-5.31	<.0001
M3_H22	1	-7467.41288	1142.06733	-6.54	<.0001
M3_H23	1	-2446.76683	1069.44949	-2.29	0.0222
M4_H5	1	-2218.51187	1112.30661	-1.99	0.0461
M4_H6	1	-4815.39518	1127.66948	-4.27	<.0001
M4_H7	1	-3778.36251	1127.40561	-3.35	0.0008
M4_H8	1	-5548.33895	1185.25861	-4.68	<.0001
M4_H9	1	-4598.93063	1186.17161	-3.88	0.0001
M4_H10	1	-4497.88478	1186.82562	-3.79	0.0002
M4_H11	1	-3327.63201	1186.43304	-2.80	0.0050
M4_H12	1	-2217.82402	1185.58165	-1.87	0.0614
M4_H13	1	-1968.00920	1185.16900	-1.66	0.0968
M4_H16	1	-2753.74040	1150.85409	-2.39	0.0167
M4_H17	1	-7638.41349	1150.54927	-6.64	<.0001
M4_H18	1	-18102	1149.96876	-15.74	<.0001
M4_H19	1	-17896	1220.77464	-14.66	<.0001
M4_H20	1	-11758	1185.14011	-9.92	<.0001
M4_H21	1	-2240.51318	1185.18623	-1.89	0.0587
M5_H7	1	6709.14089	1769.66954	3.79	0.0002
M5_H8	1	7707.33049	1769.58519	4.36	<.0001
M5_H9	1	5450.37020	1769.53439	3.08	0.0021
M5_H10	1	5170.47914	1769.51392	2.92	0.0035

M5_H11	1	6857.40809	1175.62151	5.83	<.0001
M5_H12	1	2427.80967	1295.72763	1.87	0.0610
M5_H19	1	4564.32525	1223.83577	3.73	0.0002
M5_H20	1	4292.68751	1190.08951	3.61	0.0003
M5_H21	1	4260.75342	1171.32943	3.64	0.0003
M9_H5	1	-5865.80328	1057.71158	-5.55	<.0001
M9_H6	1	2772.72658	1056.07764	2.63	0.0087
M9_H7	1	7529.79940	1780.73458	4.23	<.0001
M9_H8	1	7220.70884	1780.87326	4.05	<.0001
M9_H9	1	3926.36498	1781.13284	2.20	0.0275
M9_H10	1	3365.90121	1780.84807	1.89	0.0588
M9_H11	1	4932.04815	1193.43577	4.13	<.0001
M9_H19	1	5489.00946	1213.83564	4.52	<.0001
M9_H20	1	8851.66819	1199.50382	7.38	<.0001
M9_H21	1	7463.44547	1189.73517	6.27	<.0001
M10_H6	1	-3233.30622	1126.15240	-2.87	0.0041
M10_H7	1	-6039.99125	1126.37197	-5.36	<.0001
M10_H8	1	-7286.16295	1185.06002	-6.15	<.0001
M10_H9	1	-6494.69675	1185.83692	-5.48	<.0001
M10_H10	1	-6474.16744	1186.77060	-5.46	<.0001
M10_H11	1	-5397.64785	1187.08406	-4.55	<.0001
M10_H12	1	-4337.12868	1186.79197	-3.65	0.0003
M10_H13	1	-3707.90565	1187.27313	-3.12	0.0018
M10_H14	1	-2907.61623	1130.32472	-2.57	0.0101
M10_H15	1	-2904.00343	1131.88571	-2.57	0.0103
M10_H16	1	-4373.75062	1156.63604	-3.78	0.0002
M10_H17	1	-7183.09120	1154.62944	-6.22	<.0001
M10_H18	1	-14184	1151.03630	-12.32	<.0001
M10_H19	1	-10074	1186.25081	-8.49	<.0001
M10_H20	1	-3739.82408	1186.05931	-3.15	0.0016
M10_H21	1	-3248.58667	1185.74808	-2.74	0.0062
M10_H22	1	-4607.23869	1149.51029	-4.01	<.0001
M11_H8	1	-3486.19105	1165.38242	-2.99	0.0028
M11_H9	1	-3560.93014	1165.41948	-3.06	0.0022
M11_H10	1	-3912.85730	1165.50119	-3.36	0.0008
M11_H11	1	-3315.56879	1165.58563	-2.84	0.0045
M11_H12	1	-3001.25815	1165.64060	-2.57	0.0100
M11_H13	1	-2307.29248	1165.67370	-1.98	0.0478
M11_H19	1	-2431.99942	1165.41186	-2.09	0.0369
M11_H20	1	-2640.83141	1165.38726	-2.27	0.0235
M11_H21	1	-2960.45091	1165.38002	-2.54	0.0111
M11_H22	1	-3250.28249	1130.49395	-2.88	0.0040
S_1_H5	1	-3601.90152	497.08528	-7.25	<.0001
S_1_H6	1	8670.85981	534.68219	16.22	<.0001
S_1_H7	1	18997	1545.36455	12.29	<.0001
S_1_H8	1	24063	1588.64223	15.15	<.0001
S_1_H9	1	20809	1588.64403	13.10	<.0001
S_1_H10	1	18392	1589.62614	11.57	<.0001
S_1_H11	1	17742	878.03535	20.21	<.0001
S_1_H12	1	11697	1052.09689	11.12	<.0001
S_1_H13	1	9674.58753	913.67384	10.59	<.0001
S_1_H14	1	7735.03274	846.72265	9.14	<.0001
S_1_H15	1	7172.21216	852.58557	8.41	<.0001
S_1_H16	1	8161.64506	885.55516	9.22	<.0001
S_1_H17	1	12985	879.49626	14.76	<.0001
S_1_H18	1	23075	868.62083	26.57	<.0001
S_1_H19	1	28466	925.52432	30.76	<.0001
S_1_H20	1	23373	900.98164	25.94	<.0001
S_1_H21	1	13511	866.73199	15.59	<.0001

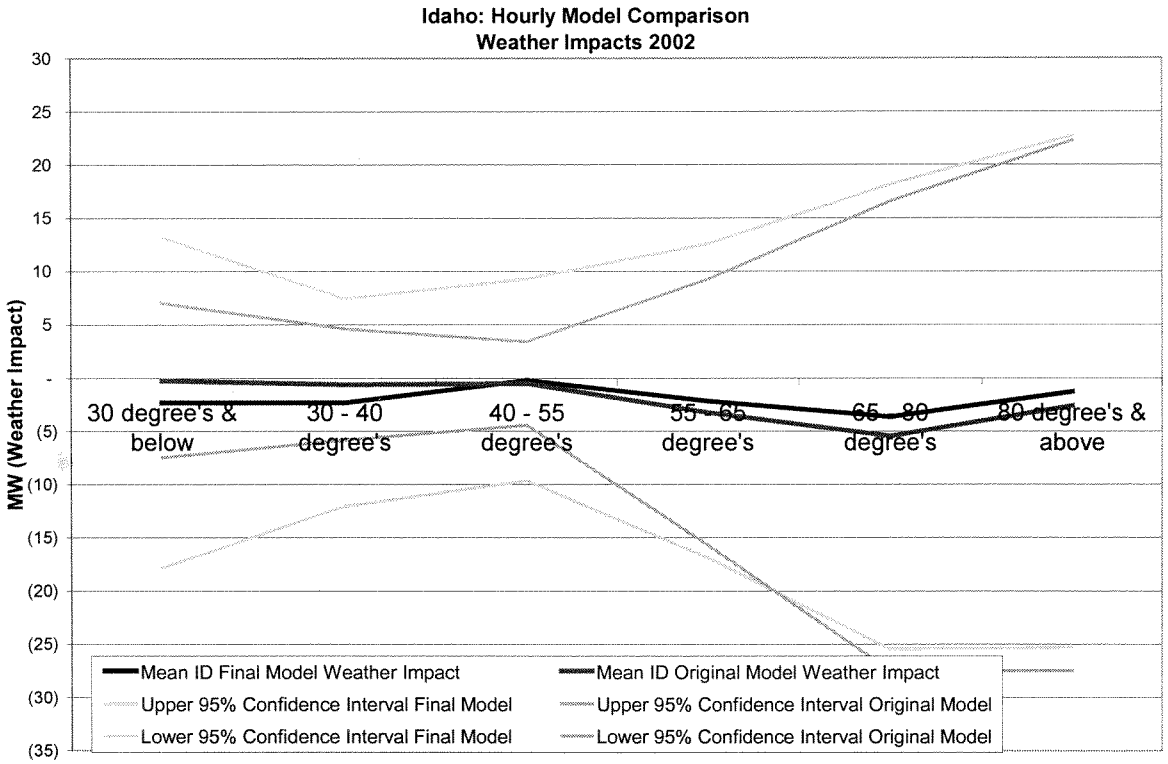
S_1_H22	1	4978.36816	706.60874	7.05	<.0001
S_2_H3	1	-2351.82848	749.80995	-3.14	0.0017
S_2_H4	1	-3488.36492	750.26710	-4.65	<.0001
S_2_H5	1	-10897	728.04730	-14.97	<.0001
S_2_H6	1	-5284.29805	710.31005	-7.44	<.0001
S_2_H7	1	-8736.18391	1606.81622	-5.44	<.0001
S_2_H8	1	-10133	1605.92548	-6.31	<.0001
S_2_H9	1	-7287.35226	1603.94800	-4.54	<.0001
S_2_H10	1	-4048.93509	1603.31395	-2.53	0.0116
S_2_H12	1	-3174.83418	1099.33151	-2.89	0.0039
S_2_H13	1	-3294.44180	994.34524	-3.31	0.0009
S_2_H14	1	-2840.11323	1022.19153	-2.78	0.0055
S_2_H15	1	-2208.80849	1036.76246	-2.13	0.0331
S_2_H16	1	-2651.48438	1038.80050	-2.55	0.0107
S_2_H17	1	-2536.09135	1025.44308	-2.47	0.0134
S_2_H18	1	-3471.77794	1001.92170	-3.47	0.0005
WE	1	-821.60624	484.08124	-1.70	0.0897
WE_H5	1	-3095.56115	645.69175	-4.79	<.0001
WE_H6	1	-7204.21777	645.92655	-11.15	<.0001
WE_H7	1	-21339	662.01441	-32.23	<.0001
WE_H8	1	-24747	662.36533	-37.36	<.0001
WE_H9	1	-14453	662.37936	-21.82	<.0001
WE_H10	1	-7761.02054	662.38775	-11.72	<.0001
WE_H11	1	-6414.68708	662.38338	-9.68	<.0001
WE_H12	1	-6965.81394	662.26264	-10.52	<.0001
WE_H13	1	-7814.73430	662.29753	-11.80	<.0001
WE_H14	1	-8952.06751	662.06468	-13.52	<.0001
WE_H15	1	-9077.44349	662.02052	-13.71	<.0001
WE_H16	1	-8966.48050	662.21363	-13.54	<.0001
WE_H17	1	-7935.71422	662.17983	-11.98	<.0001
WE_H18	1	-7778.12136	662.13637	-11.75	<.0001
WE_H19	1	-8821.42711	662.59450	-13.31	<.0001
WE_H20	1	-8928.03030	662.55028	-13.48	<.0001
WE_H21	1	-8163.08622	662.37389	-12.32	<.0001
WE_H22	1	-7338.98130	662.13871	-11.08	<.0001
WE_H23	1	-4521.63397	661.54647	-6.83	<.0001
WY3	1	1189.90313	495.59762	2.40	0.0164
WY4	1	-4177.93913	494.46106	-8.45	<.0001
WY6	1	6485.76396	748.13351	8.67	<.0001
WY7	1	5132.50682	803.17152	6.39	<.0001
WY8	1	1692.86113	805.42638	2.10	0.0356
WY9	1	-1527.12022	808.23435	-1.89	0.0588
WY10	1	-2882.84359	950.18303	-3.03	0.0024
WY11	1	-5245.56680	1012.65171	-5.18	<.0001
WY12	1	-7699.25276	1033.50701	-7.45	<.0001
WY13	1	-11492	1054.47196	-10.90	<.0001
WY14	1	-14368	1048.64628	-13.70	<.0001
WY15	1	-14426	1150.30160	-12.54	<.0001
WY16	1	-14857	1165.74233	-12.74	<.0001
WY17	1	-14073	1187.44387	-11.85	<.0001
WY18	1	-17037	1139.01578	-14.96	<.0001
WY19	1	-17059	1155.75373	-14.76	<.0001
WY20	1	-12488	1173.22743	-10.64	<.0001
WY21	1	-13863	1180.83555	-11.74	<.0001
WY22	1	-9510.10743	1140.58799	-8.34	<.0001
WY23	1	-14492	1044.63743	-13.87	<.0001
WY24	1	-18875	994.43760	-18.98	<.0001
WY25	1	-12611	813.24116	-15.51	<.0001
WY26	1	-11088	810.54871	-13.68	<.0001

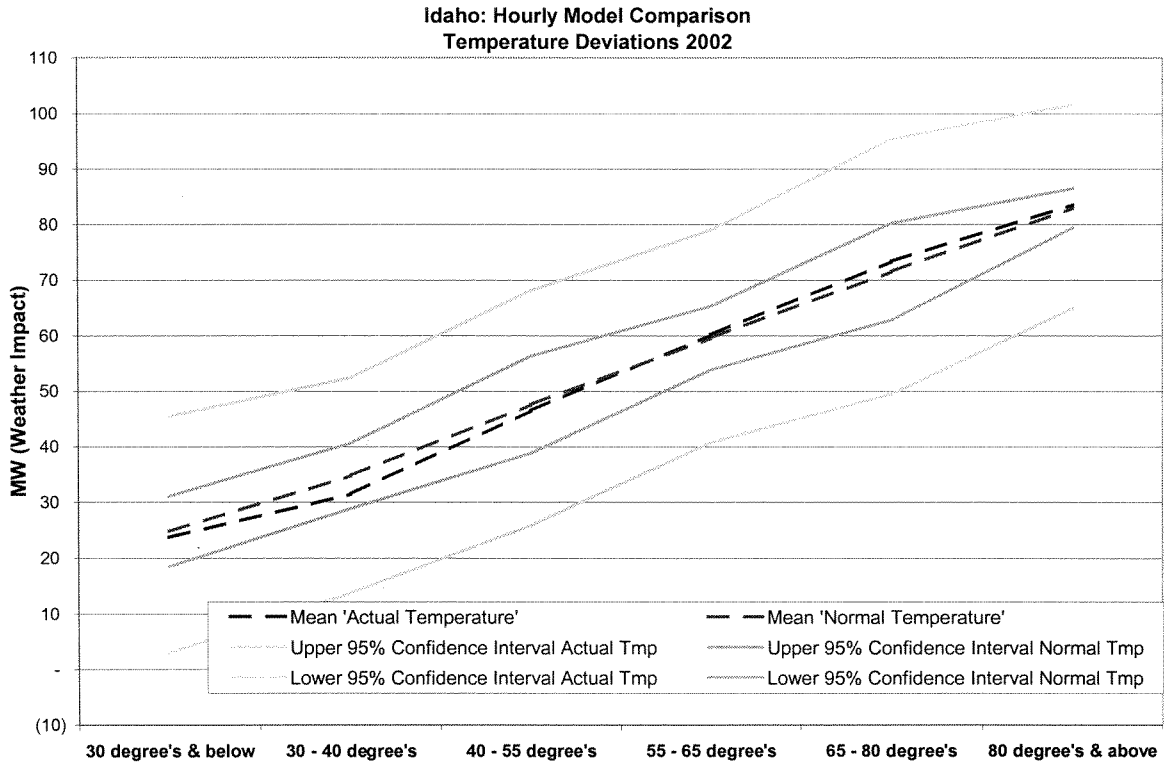
WY28	1	-6940.20806	631.38123	-10.99	<.0001
WY29	1	-3470.80129	626.18482	-5.54	<.0001
WY30	1	-9100.27457	629.53444	-14.46	<.0001
WY31	1	-4305.64932	614.65028	-7.01	<.0001
WY32	1	3593.21654	758.83328	4.74	<.0001
WY33	1	6814.51385	799.54459	8.52	<.0001
WY34	1	6963.38783	773.73682	9.00	<.0001
WY35	1	3722.09957	762.35904	4.88	<.0001
WY36	1	4274.32215	545.23952	7.84	<.0001
WY37	1	-1112.14818	544.89024	-2.04	0.0413
WY38	1	-2439.11335	536.65943	-4.54	<.0001
WY41	1	-1018.47515	536.03302	-1.90	0.0574
WY42	1	-2354.03694	524.82523	-4.49	<.0001
WY44	1	6264.11751	536.25819	11.68	<.0001
WY45	1	5996.11261	699.55042	8.57	<.0001
WY46	1	6268.26048	763.82113	8.21	<.0001
WY47	1	8986.53524	775.93234	11.58	<.0001
WY48	1	8068.83501	776.05267	10.40	<.0001
WY49	1	2827.38549	614.36547	4.60	<.0001
WY50	1	3257.85949	638.11685	5.11	<.0001
WY51	1	10388	638.42370	16.27	<.0001
WY52	1	9019.63165	639.50206	14.10	<.0001
H19_WY18	1	-4290.51447	2195.76489	-1.95	0.0507

IDAHO APPENDIX

Idaho Appendix

Weather Impacts for each of the hourly models





Model Statistics by Month, Hour & Day of Week

Idaho **Model Statistics**

Month of Year	*Final Model*	*Original Model*	*Final Model*	*Original Model*	*Final Model*	*Original Model*
2002 Stats	Mean Calibrated Estimate % Error	Mean Calibrated % Error	Mean Calibrated ABS % Error	Mean ABS Calibrated % Error	Sum Tmp Impact	Sum Weather Impact
Jan	1.1%	0.9%	5.2%	4.5%	(640,807)	(154,757)
Feb	3.3%	2.1%	4.8%	4.1%	(5,926,780)	(2,502,222)
Mar	3.1%	3.6%	6.6%	6.9%	(1,242,836)	(6,620)
Apr	-7.1%	-9.3%	8.7%	10.6%	(124,431)	(26,438)
May	-4.9%	-6.4%	7.0%	8.3%	660,599	(1,668,532)
Jun	1.5%	0.9%	5.9%	6.2%	(1,678,133)	(3,506,033)
Jul	2.3%	2.0%	5.4%	4.6%	(4,269,716)	(4,370,799)
Aug	3.2%	1.8%	5.7%	6.0%	(204,492)	(1,888,977)
Sep	-2.1%	-2.7%	4.6%	4.9%	(152,228)	(1,209,878)
Oct	-2.2%	-2.1%	5.4%	5.1%	(2,116,147)	16,227
Nov	4.5%	4.7%	6.4%	6.2%	(1,744,527)	(653,936)
Dec	-3.9%	-3.7%	4.2%	4.1%	878,653	1,521,792
Grand Total	-0.1%	-0.7%	5.8%	6.0%	(16,560,847)	(14,450,171)

Hours of Day	*Final Model*	*Original Model*	*Final Model*	*Original Model*	*Final Model*	*Original Model*
2002 Stats	Mean Calibrated Estimate % Error	Mean Calibrated % Error	Mean Calibrated ABS % Error	Mean ABS Calibrated % Error	Sum Tmp Impact	Sum Weather Impact
HR1	-1.1%	-1.3%	6.4%	6.6%	(614,233)	(446,222)
HR2	-0.6%	-1.2%	6.1%	6.5%	(529,046)	(384,728)
HR3	-0.4%	-1.0%	6.0%	6.4%	(493,503)	(346,614)
HR4	-0.1%	-0.7%	5.7%	5.9%	(466,337)	(314,478)
HR5	-0.2%	-0.6%	5.6%	5.6%	(380,832)	(289,727)
HR6	-0.2%	-0.7%	5.7%	5.9%	(341,534)	(245,920)
HR7	-0.4%	-0.9%	5.9%	6.1%	(494,960)	(465,688)
HR8	0.1%	-0.4%	5.3%	5.5%	(746,719)	(827,372)
HR9	0.2%	-0.3%	5.2%	5.3%	(1,007,877)	(1,210,108)
HR10	-0.4%	-1.1%	6.1%	6.4%	(1,267,251)	(1,468,575)
HR11	-0.4%	-1.2%	6.3%	6.5%	(1,221,689)	(1,417,269)
HR12	-0.4%	-1.0%	6.0%	6.1%	(1,342,992)	(1,443,281)
HR13	0.0%	-0.8%	6.1%	6.1%	(1,392,801)	(1,439,223)
HR14	0.5%	-0.2%	6.3%	6.3%	(1,175,499)	(1,171,371)
HR15	0.8%	0.1%	6.2%	6.1%	(970,949)	(923,398)
HR16	0.9%	0.3%	5.8%	5.6%	(918,458)	(851,968)
HR17	0.7%	0.2%	5.7%	5.5%	(715,508)	(571,943)
HR18	0.4%	-0.1%	5.5%	5.6%	(447,212)	(166,359)
HR19	0.0%	-0.4%	5.5%	5.6%	(218,535)	133,574
HR20	0.1%	-0.3%	5.3%	5.5%	(90,942)	265,488
HR21	-0.3%	-0.7%	5.2%	5.5%	(195,522)	48,966
HR22	-0.7%	-1.3%	5.8%	6.2%	(333,417)	(126,478)
HR23	-0.8%	-1.4%	5.9%	6.3%	(573,049)	(347,119)
HR24	-0.4%	-1.3%	5.8%	6.0%	(621,981)	(440,357)
Grand Total	-0.1%	-0.7%	5.8%	6.0%	(16,560,847)	(14,450,171)

Day of Week	*Final Model*	*Original Model*	*Final Model*	*Original Model*	*Final Model*	*Original Model*
2002 Stats	Mean Calibrated Estimate % Error	Mean Calibrated % Error	Mean Calibrated ABS % Error	Mean ABS Calibrated % Error	Sum Tmp Impact	Sum Weather Impact
Sun	-0.6%	-0.9%	6.0%	6.6%	(1,813,913)	(2,388,589)
Mon	0.4%	-0.4%	6.5%	6.7%	(2,380,987)	(2,420,499)
Tue	0.0%	-0.5%	5.9%	5.9%	(2,927,381)	(2,224,806)
Wed	-0.2%	-0.5%	5.5%	5.4%	(3,840,889)	(2,652,505)
Thu	0.2%	-0.5%	5.7%	5.8%	(2,126,584)	(1,507,500)
Fri	0.3%	-0.3%	5.4%	5.4%	(1,972,455)	(1,733,582)
Sat	-0.9%	-1.7%	5.6%	5.9%	(1,498,638)	(1,522,690)
Grand Total	-0.1%	-0.7%	5.8%	6.0%	(16,560,847)	(14,450,171)

Idaho *Original* Hourly Splines & Variables

The REG Procedure
Model: MODEL1
Dependent Variable: ID

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	178	1.752168E14	9.843638E11	792.94	<.0001
Error	26125	3.2432E13	1241416439		
Corrected Total	26303	2.076488E14			

Root MSE	35234	R-Square	0.8438
Dependent Mean	394609	Adj R-Sq	0.8427
Coeff Var	8.92877		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-518567	19337	-26.82	<.0001
PIH_SUN	1	825.00804	32.14661	25.66	<.0001
ID_MA	1	1.07742	0.03208	33.59	<.0001
PIH_HDD	1	339.17851	37.18579	9.12	<.0001
PIH_CDDS	1	147.10813	216.96530	0.68	0.4978
PIH_CDD	1	1245.43440	71.21035	17.49	<.0001
PIH_S2_HCDD	1	572.52680	58.49225	9.79	<.0001
S_1	1	-8007.73701	3460.62214	-2.31	0.0207
S_2	1	21080	3957.50869	5.33	<.0001
H1	1	-15139	3477.20480	-4.35	<.0001
H2	1	-20411	3477.95218	-5.87	<.0001
H3	1	-22488	3478.56852	-6.46	<.0001
H4	1	-23597	3479.17512	-6.78	<.0001
H5	1	-18391	3478.56252	-5.29	<.0001
H6	1	-5946.13493	3478.49113	-1.71	0.0874
H7	1	10612	3477.23958	3.05	0.0023
H8	1	16068	3477.28565	4.62	<.0001
H9	1	22090	3478.10803	6.35	<.0001
H10	1	16618	3481.84458	4.77	<.0001
H11	1	20436	3489.36743	5.86	<.0001
H12	1	20754	3501.70422	5.93	<.0001
H13	1	14202	3515.35137	4.04	<.0001
H14	1	10022	3525.62966	2.84	0.0045
H15	1	9456.45156	3533.17156	2.68	0.0074
H16	1	9760.76910	3533.98205	2.76	0.0057
H17	1	12016	3541.27226	3.39	0.0007
H18	1	17584	3521.25713	4.99	<.0001
H19	1	25934	3500.83004	7.41	<.0001
H20	1	33201	3494.46645	9.50	<.0001
H21	1	38074	3477.84577	10.95	<.0001
H22	1	21916	3477.42031	6.30	<.0001
H23	1	8015.94994	3477.37712	2.31	0.0212
S_1_H1	1	3884.70360	3864.31303	1.01	0.3148

S_1_H2	1	7523.91443	3864.90252	1.95	0.0516
S_1_H3	1	11732	3865.75021	3.03	0.0024
S_1_H4	1	18665	3865.73111	4.83	<.0001
S_1_H5	1	24933	3865.46209	6.45	<.0001
S_1_H6	1	32406	3865.55365	8.38	<.0001
S_1_H7	1	27358	3864.67651	7.08	<.0001
S_1_H8	1	17763	3864.77660	4.60	<.0001
S_1_H9	1	7806.03365	3865.18437	2.02	0.0434
S_1_H10	1	3168.41850	3868.58843	0.82	0.4128
S_1_H11	1	-3454.37836	3876.44606	-0.89	0.3729
S_1_H12	1	-4563.01525	3889.11804	-1.17	0.2407
S_1_H13	1	-3011.49678	3903.06666	-0.77	0.4404
S_1_H14	1	-2175.80750	3913.88726	-0.56	0.5783
S_1_H15	1	161.88067	3920.49037	0.04	0.9671
S_1_H16	1	6194.77396	3921.03296	1.58	0.1141
S_1_H17	1	17164	3954.22433	4.34	<.0001
S_1_H18	1	19077	3934.64662	4.85	<.0001
S_1_H19	1	11121	3915.39176	2.84	0.0045
S_1_H20	1	338.33461	3898.16815	0.09	0.9308
S_1_H21	1	-8919.64980	3864.97811	-2.31	0.0210
S_1_H22	1	-3795.41209	3864.55861	-0.98	0.3261
S_1_H23	1	-1581.52328	3864.44268	-0.41	0.6824
S_2_H1	1	1739.39203	4654.32631	0.37	0.7086
S_2_H2	1	213.69782	4657.99294	0.05	0.9634
S_2_H3	1	-2753.21694	4662.25113	-0.59	0.5548
S_2_H4	1	-6067.14427	4665.69087	-1.30	0.1935
S_2_H5	1	-13429	4668.15922	-2.88	0.0040
S_2_H6	1	-21119	4670.13487	-4.52	<.0001
S_2_H7	1	-25390	4659.73019	-5.45	<.0001
S_2_H8	1	-17816	4656.81371	-3.83	0.0001
S_2_H9	1	-15685	4665.72475	-3.36	0.0008
S_2_H10	1	-16091	4685.28120	-3.43	0.0006
S_2_H11	1	-19390	4710.69960	-4.12	<.0001
S_2_H12	1	-21387	4737.02409	-4.51	<.0001
S_2_H13	1	-28141	4760.20451	-5.91	<.0001
S_2_H14	1	-33604	4779.85616	-7.03	<.0001
S_2_H15	1	-35955	4787.31782	-7.51	<.0001
S_2_H16	1	-39103	4792.15015	-8.16	<.0001
S_2_H17	1	-37860	4797.72815	-7.89	<.0001
S_2_H18	1	-31579	4786.91814	-6.60	<.0001
S_2_H19	1	-25694	4752.15563	-5.41	<.0001
S_2_H20	1	-17236	4693.65221	-3.67	0.0002
S_2_H21	1	-7917.53881	4664.24340	-1.70	0.0896
S_2_H22	1	903.22698	4659.14994	0.19	0.8463
S_2_H23	1	3216.27665	4654.81152	0.69	0.4896
D1	1	-15615	814.26493	-19.18	<.0001
D2	1	-8709.19779	1694.96574	-5.14	<.0001
D3	1	-221.13065	1749.27648	-0.13	0.8994
D4	1	-1514.15314	1767.68138	-0.86	0.3917
D5	1	-1633.45092	1739.47434	-0.94	0.3477
D6	1	-4503.93334	1748.57432	-2.58	0.0100
WE	1	-9568.36004	2758.50447	-3.47	0.0005
WE_H1	1	13197	3256.62671	4.05	<.0001
WE_H2	1	13593	3256.60553	4.17	<.0001
WE_H3	1	12908	3258.30801	3.96	<.0001
WE_H4	1	9074.67990	3254.99882	2.79	0.0053
WE_H5	1	2626.83274	3256.72786	0.81	0.4199
WE_H6	1	-10013	3256.66623	-3.07	0.0021
WE_H7	1	-14402	3256.61958	-4.42	<.0001

WE_H8	1	-3308.22889	3256.65637	-1.02	0.3097
WE_H9	1	574.15199	3256.84617	0.18	0.8601
WE_H10	1	3780.62527	3256.80232	1.16	0.2457
WE_H11	1	1377.70907	3256.89332	0.42	0.6723
WE_H12	1	3737.99294	3256.96142	1.15	0.2511
WE_H13	1	1713.19242	3257.06481	0.53	0.5989
WE_H14	1	2997.07741	3257.22635	0.92	0.3575
WE_H15	1	2006.71516	3257.07157	0.62	0.5378
WE_H16	1	947.57271	3257.04405	0.29	0.7711
WE_H17	1	933.28089	3257.08499	0.29	0.7745
WE_H18	1	-4012.03385	3257.14984	-1.23	0.2180
WE_H19	1	-4831.21137	3257.04844	-1.48	0.1380
WE_H20	1	-3731.50292	3256.93357	-1.15	0.2519
WE_H21	1	-1428.55801	3256.65233	-0.44	0.6609
WE_H22	1	-3965.32498	3256.66821	-1.22	0.2234
WE_H23	1	-1173.11411	3256.70610	-0.36	0.7187
WY1	1	1060.84997	2902.80173	0.37	0.7148
WY2	1	-23830	2578.20968	-9.24	<.0001
WY3	1	-20775	2638.16496	-7.87	<.0001
WY4	1	-19410	2769.23434	-7.01	<.0001
WY5	1	-43185	2987.87854	-14.45	<.0001
WY6	1	-63608	3292.20857	-19.32	<.0001
WY7	1	-73281	3687.49996	-19.87	<.0001
WY8	1	-92735	4161.36009	-22.28	<.0001
WY9	1	-118495	4702.61879	-25.20	<.0001
WY10	1	-148383	5395.81487	-27.50	<.0001
WY11	1	-157529	5987.29930	-26.31	<.0001
WY12	1	-189393	6576.60227	-28.80	<.0001
WY13	1	-199113	7181.13410	-27.73	<.0001
WY14	1	-210474	7816.44712	-26.93	<.0001
WY15	1	-226026	8431.67888	-26.81	<.0001
WY16	1	-249007	9030.18022	-27.58	<.0001
WY17	1	-242750	9611.06792	-25.26	<.0001
WY18	1	-231979	10039	-23.11	<.0001
WY19	1	-210958	10483	-20.12	<.0001
WY20	1	-214950	10955	-19.62	<.0001
WY21	1	-192365	11369	-16.92	<.0001
WY22	1	-166917	11718	-14.24	<.0001
WY23	1	-162685	11989	-13.57	<.0001
WY24	1	-169045	12126	-13.94	<.0001
WY25	1	-153361	12180	-12.59	<.0001
WY26	1	-133083	12193	-10.91	<.0001
WY27	1	-88605	12082	-7.33	<.0001
WY28	1	-74868	11890	-6.30	<.0001
WY29	1	-101657	11594	-8.77	<.0001
WY30	1	-167995	11230	-14.96	<.0001
WY31	1	-192756	10806	-17.84	<.0001
WY32	1	-183310	10334	-17.74	<.0001
WY33	1	-170226	9825.79420	-17.32	<.0001
WY34	1	-136329	9305.46614	-14.65	<.0001
WY35	1	-127378	8763.77374	-14.53	<.0001
WY36	1	-128225	8100.76185	-15.83	<.0001
WY37	1	-169876	7558.50290	-22.47	<.0001
WY38	1	-157270	6990.98621	-22.50	<.0001
WY39	1	-128838	6437.86654	-20.01	<.0001
WY40	1	-125831	5789.84532	-21.73	<.0001
WY41	1	-119634	5316.55527	-22.50	<.0001
WY42	1	-106252	4781.80495	-22.22	<.0001
WY43	1	-94892	4296.94589	-22.08	<.0001

WY44	1	-83344	3797.48349	-21.95	<.0001
WY45	1	-69697	3310.44372	-21.05	<.0001
WY46	1	-89528	2994.27141	-29.90	<.0001
WY47	1	-86191	2767.19779	-31.15	<.0001
WY48	1	-40273	2642.67739	-15.24	<.0001
WY49	1	-17374	2571.72589	-6.76	<.0001
WY50	1	557.33166	2548.83113	0.22	0.8269
WY51	1	5667.85108	2549.08013	2.22	0.0262
WY52	1	5996.36724	2551.38604	2.35	0.0188
H17_WY14	1	-15099	8021.90805	-1.88	0.0598
H17_WY15	1	-12304	8031.48121	-1.53	0.1255
H17_WY16	1	-8446.88899	8029.77347	-1.05	0.2928
H17_WY17	1	-2361.14379	8029.79315	-0.29	0.7687
H18_WY14	1	-23693	8021.41131	-2.95	0.0031
H18_WY15	1	-18437	8030.45683	-2.30	0.0217
H18_WY16	1	-20065	8029.17197	-2.50	0.0125
H18_WY17	1	-13427	8029.29194	-1.67	0.0945
H19_WY14	1	-16718	8020.29967	-2.08	0.0371
H19_WY15	1	-20806	8030.37802	-2.59	0.0096
H19_WY16	1	-20464	8029.73687	-2.55	0.0108
H19_WY17	1	-16604	8030.35519	-2.07	0.0387
H17_WY18	1	4832.05591	8002.42468	0.60	0.5460
H18_WY18	1	-3807.76710	8000.81011	-0.48	0.6341
H19_WY18	1	-12209	7999.11657	-1.53	0.1270
H20_WY15	1	-6166.44815	8024.44767	-0.77	0.4422
H20_WY16	1	-5029.89204	8023.40289	-0.63	0.5307
H20_WY17	1	1222.78880	8023.54265	0.15	0.8789
H20_WY18	1	-3706.82496	7997.01941	-0.46	0.6430

Idaho *Final* Hourly Splines & Variables

The REG Procedure
Model: MODEL1
Dependent Variable: ID

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	192	1.775251E14	9.246098E11	801.45	<.0001
Error	26111	3.012367E13	1153677390		
Corrected Total	26303	2.076488E14			

Root MSE	33966	R-Square	0.8549
Dependent Mean	394609	Adj R-Sq	0.8539
Coeff Var	8.60747		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-595459	18517	-32.16	<.0001
ID_MA	1	1.10115	0.03035	36.28	<.0001
PIH_SUN	1	655.20560	22.20369	29.51	<.0001
Day_PIH_Min	1	551.86982	51.71892	10.67	<.0001
PIH_CDD65Pl	1	1024.98537	66.94948	15.31	<.0001
LagDay_PIH_Max	1	434.52684	38.73545	11.22	<.0001
PIH_HDD57Le	1	602.00034	44.48683	13.53	<.0001
PIH_HDD30Le	1	518.11787	75.05869	6.90	<.0001
PIH_S2_HCDD	1	714.04234	55.25289	12.92	<.0001
S_1	1	85719	4753.47919	18.03	<.0001
M1	1	13083	3328.78613	3.93	<.0001
M2	1	-35723	2727.35908	-13.10	<.0001
M5	1	66768	4084.89678	16.35	<.0001
M6	1	87879	4100.45058	21.43	<.0001
M7	1	54468	3800.05093	14.33	<.0001
M8	1	12144	3286.16580	3.70	0.0002
M10	1	-40758	3481.67907	-11.71	<.0001
M11	1	-23631	3735.78116	-6.33	<.0001
M12	1	17061	3803.22868	4.49	<.0001
D2	1	15958	2090.57561	7.63	<.0001
D3	1	32102	2315.94978	13.86	<.0001
D4	1	30777	2309.56706	13.33	<.0001
D5	1	31697	2323.23233	13.64	<.0001
D6	1	34641	2325.35178	14.90	<.0001
D7	1	29120	1707.85114	17.05	<.0001
D2_S1	1	-9918.01007	1985.02725	-5.00	<.0001
D3_S1	1	-23292	1967.62312	-11.84	<.0001
D4_S1	1	-23854	1965.38900	-12.14	<.0001
D5_S1	1	-25863	1992.56285	-12.98	<.0001
D6_S1	1	-32449	2003.13670	-16.20	<.0001
D7_S1	1	-27760	2015.71898	-13.77	<.0001
D2_S2	1	10486	2291.48296	4.58	<.0001
D3_S2	1	14601	2265.25334	6.45	<.0001

D4_S2	1	14503	2262.59904	6.41	<.0001
D5_S2	1	14517	2288.62068	6.34	<.0001
D6_S2	1	3984.49953	2275.50071	1.75	0.0800
D7_S2	1	12362	2275.21319	5.43	<.0001
H2	1	-10178	1353.24656	-7.52	<.0001
H3	1	-14404	1860.02540	-7.74	<.0001
H4	1	-18353	1861.39559	-9.86	<.0001
H5	1	-22828	2432.46256	-9.38	<.0001
H6	1	-18106	2433.39310	-7.44	<.0001
H7	1	-4947.49807	2425.12905	-2.04	0.0414
H8	1	8315.86210	2423.46887	3.43	0.0006
H9	1	32195	1679.63433	19.17	<.0001
H10	1	22327	1786.18678	12.50	<.0001
H11	1	29317	2630.56105	11.14	<.0001
H12	1	29959	2645.53319	11.32	<.0001
H13	1	23723	2661.23570	8.91	<.0001
H14	1	11131	2023.61138	5.50	<.0001
H15	1	12829	2026.33267	6.33	<.0001
H16	1	5674.90870	5504.76439	1.03	0.3026
H17	1	9035.86560	5496.81306	1.64	0.1002
H18	1	26872	2650.16727	10.14	<.0001
H19	1	34259	2626.71527	13.04	<.0001
H20	1	41485	2619.26204	15.84	<.0001
H21	1	46357	2618.06300	17.71	<.0001
H22	1	30768	2007.44112	15.33	<.0001
H23	1	18073	2004.28581	9.02	<.0001
M3_H17	1	-14208	3899.27509	-3.64	0.0003
M3_H18	1	-11169	3938.14065	-2.84	0.0046
M4_H10	1	11291	3946.62012	2.86	0.0042
M4_H11	1	15554	4042.54875	3.85	0.0001
M4_H12	1	15261	4041.94404	3.78	0.0002
M4_H13	1	14962	4042.52301	3.70	0.0002
M4_H14	1	13242	4015.94152	3.30	0.0010
M4_H15	1	14045	4015.54595	3.50	0.0005
M4_H16	1	7974.94946	4042.72429	1.97	0.0485
M5_H5	1	10322	4256.99330	2.42	0.0153
M5_H6	1	19720	4257.43358	4.63	<.0001
M5_H7	1	25186	4253.18101	5.92	<.0001
M5_H8	1	17239	4252.41564	4.05	<.0001
M5_H14	1	13246	4069.53753	3.25	0.0011
M5_H15	1	12146	4072.77174	2.98	0.0029
M5_H16	1	18703	6472.84528	2.89	0.0039
M5_H17	1	18180	6472.15867	2.81	0.0050
M9_H5	1	21025	4309.23883	4.88	<.0001
M9_H6	1	31110	4309.74013	7.22	<.0001
M9_H7	1	31299	4305.87062	7.27	<.0001
M9_H8	1	19640	4306.43978	4.56	<.0001
M9_H14	1	8552.94954	4146.29894	2.06	0.0391
M9_H15	1	5942.43941	4151.60794	1.43	0.1523
M9_H16	1	15725	6504.79379	2.42	0.0156
M9_H17	1	13841	6504.95448	2.13	0.0334
M10_H6	1	-7332.99670	3934.92278	-1.86	0.0624
M10_H10	1	8156.29777	3891.26658	2.10	0.0361
M10_H11	1	12652	3993.40010	3.17	0.0015
M10_H12	1	13102	3994.74193	3.28	0.0010
M10_H13	1	15481	3996.14778	3.87	0.0001
M10_H14	1	14495	3969.12690	3.65	0.0003
M10_H15	1	13941	3968.75962	3.51	0.0004
M10_H16	1	11708	3997.15324	2.93	0.0034

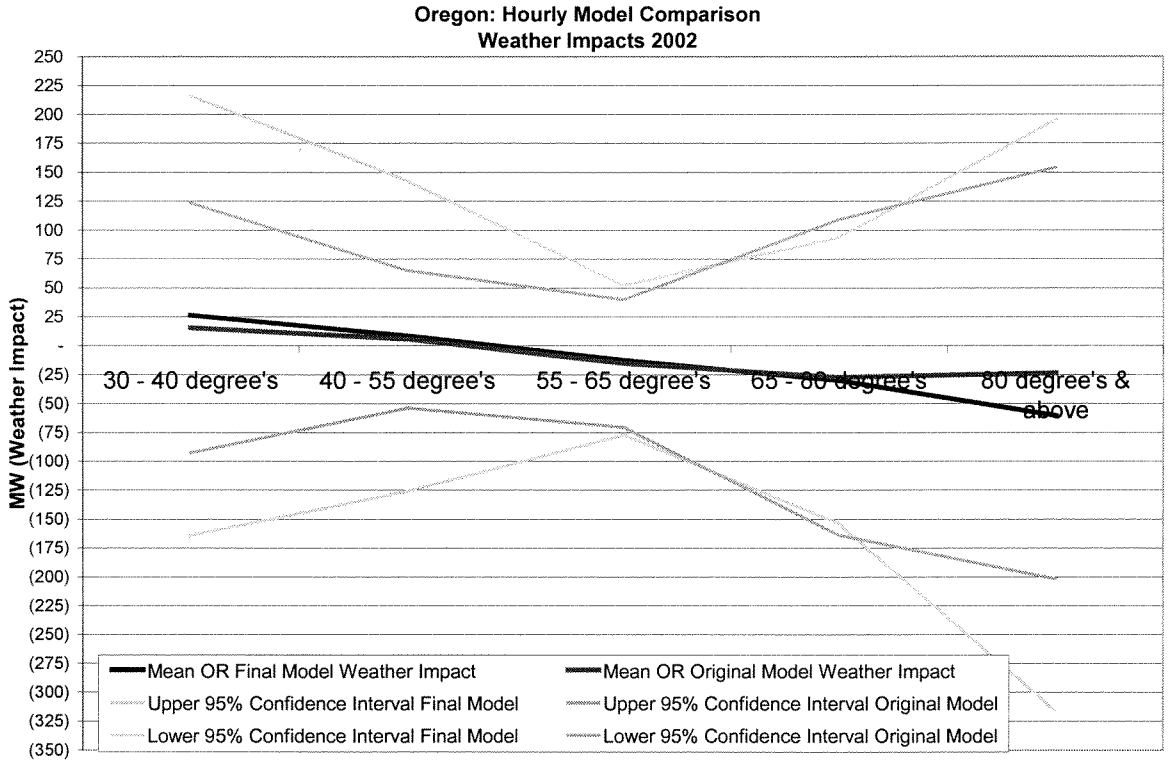
S_1_H1	1	-7930.64389	1720.43410	-4.61	<.0001
S_1_H3	1	6196.17815	2346.21461	2.64	0.0083
S_1_H4	1	14289	2347.20544	6.09	<.0001
S_1_H5	1	30265	2740.62209	11.04	<.0001
S_1_H6	1	46288	2799.57381	16.53	<.0001
S_1_H7	1	43672	2735.48351	15.97	<.0001
S_1_H8	1	27023	2730.77547	9.90	<.0001
S_1_H11	1	-10862	2999.25639	-3.62	0.0003
S_1_H12	1	-11466	3014.55030	-3.80	0.0001
S_1_H13	1	-9926.20274	3031.60992	-3.27	0.0011
S_1_H16	1	15010	5699.02566	2.63	0.0084
S_1_H17	1	28226	5652.15361	4.99	<.0001
S_1_H18	1	16607	2984.76635	5.56	<.0001
S_1_H19	1	6375.18213	2891.95867	2.20	0.0275
S_1_H20	1	-3739.26495	2862.60940	-1.31	0.1915
S_1_H21	1	-13114	2861.32355	-4.58	<.0001
S_1_H22	1	-8974.21413	2347.86284	-3.82	0.0001
S_1_H23	1	-8462.32029	2344.96854	-3.61	0.0003
S_2_H9	1	-16345	2758.26064	-5.93	<.0001
S_2_H10	1	-12238	2860.42198	-4.28	<.0001
S_2_H11	1	-18594	3431.11576	-5.42	<.0001
S_2_H12	1	-20784	3471.44040	-5.99	<.0001
S_2_H13	1	-27730	3505.26186	-7.91	<.0001
S_2_H14	1	-24746	3269.62879	-7.57	<.0001
S_2_H15	1	-29392	3287.01916	-8.94	<.0001
S_2_H16	1	-25114	5962.20635	-4.21	<.0001
S_2_H17	1	-24998	5959.20932	-4.19	<.0001
S_2_H18	1	-31315	3529.89319	-8.87	<.0001
S_2_H19	1	-24833	3479.23118	-7.14	<.0001
S_2_H20	1	-16590	3391.10797	-4.89	<.0001
S_2_H21	1	-7508.38644	3364.02900	-2.23	0.0256
WE	1	5956.67105	1815.35620	3.28	0.0010
WE_H5	1	-7205.42249	2432.37769	-2.96	0.0031
WE_H6	1	-19995	2433.25980	-8.22	<.0001
WE_H7	1	-24329	2432.38936	-10.00	<.0001
WE_H8	1	-13122	2432.46842	-5.39	<.0001
WE_H9	1	-9239.24822	2432.10354	-3.80	0.0001
WE_H10	1	-5885.21660	2433.06909	-2.42	0.0156
WE_H11	1	-8071.13892	2433.22060	-3.32	0.0009
WE_H12	1	-5534.91162	2433.19895	-2.27	0.0229
WE_H13	1	-7529.15395	2433.32229	-3.09	0.0020
WE_H14	1	-6266.39600	2433.62983	-2.57	0.0100
WE_H15	1	-7268.29301	2433.41994	-2.99	0.0028
WE_H16	1	-8545.61432	2433.68665	-3.51	0.0004
WE_H17	1	-8918.12359	2432.75217	-3.67	0.0002
WE_H18	1	-13784	2432.44311	-5.67	<.0001
WE_H19	1	-14612	2432.14717	-6.01	<.0001
WE_H20	1	-13604	2431.96400	-5.59	<.0001
WE_H21	1	-11395	2431.89675	-4.69	<.0001
WE_H22	1	-14021	2431.74201	-5.77	<.0001
WE_H23	1	-11325	2431.83017	-4.66	<.0001
WY2	1	-9069.47144	1861.15758	-4.87	<.0001
WY3	1	-4309.84346	1816.56467	-2.37	0.0177
WY8	1	-12500	1986.18892	-6.29	<.0001
WY9	1	-47207	2146.11603	-22.00	<.0001
WY10	1	-98563	3108.14027	-31.71	<.0001
WY11	1	-108309	3527.94772	-30.70	<.0001
WY12	1	-137057	3812.10648	-35.95	<.0001
WY13	1	-143256	4061.33151	-35.27	<.0001

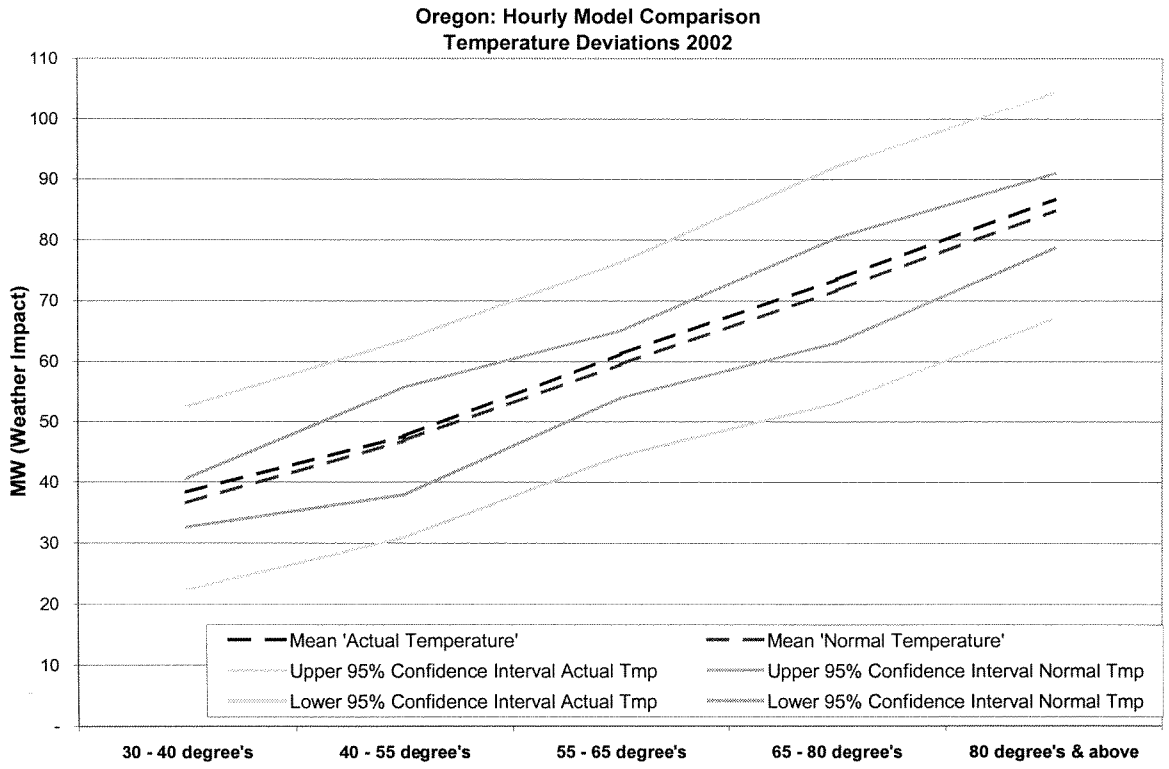
WY14	1	-140298	4233.89443	-33.14	<.0001
WY15	1	-145460	4618.86636	-31.49	<.0001
WY16	1	-164529	4915.18512	-33.47	<.0001
WY17	1	-152724	5222.54375	-29.24	<.0001
WY18	1	-144720	5395.74382	-26.82	<.0001
WY19	1	-124573	5770.06438	-21.59	<.0001
WY20	1	-128117	6034.22708	-21.23	<.0001
WY21	1	-102373	6259.95658	-16.35	<.0001
WY22	1	-82694	6402.69560	-12.92	<.0001
WY23	1	-83699	6423.49012	-13.03	<.0001
WY24	1	-90285	6567.86192	-13.75	<.0001
WY25	1	-74627	6641.91501	-11.24	<.0001
WY26	1	-55712	6681.39421	-8.34	<.0001
WY27	1	9340.57916	6235.35800	1.50	0.1341
WY28	1	33944	6155.77870	5.51	<.0001
WY29	1	5290.95316	5995.37579	0.88	0.3775
WY30	1	-63303	5804.42812	-10.91	<.0001
WY31	1	-76246	5347.90343	-14.26	<.0001
WY32	1	-46174	5023.71975	-9.19	<.0001
WY33	1	-30258	4796.16312	-6.31	<.0001
WY34	1	512.20001	4547.36942	0.11	0.9103
WY35	1	7398.47536	4234.83400	1.75	0.0806
WY36	1	3328.49035	3218.56291	1.03	0.3011
WY37	1	-36824	2928.13789	-12.58	<.0001
WY38	1	-28888	2778.68437	-10.40	<.0001
WY39	1	-2168.37212	2649.80434	-0.82	0.4132
WY41	1	-12121	2015.42943	-6.01	<.0001
WY42	1	-3433.23389	1929.72269	-1.78	0.0752
WY44	1	3951.61975	1980.60636	2.00	0.0460
WY45	1	-6301.40986	2578.80570	-2.44	0.0146
WY46	1	-31755	2818.36925	-11.27	<.0001
WY47	1	-30262	2880.32043	-10.51	<.0001
WY48	1	11464	2926.57338	3.92	<.0001
WY49	1	3494.36125	2265.76757	1.54	0.1230
WY50	1	10014	2344.94746	4.27	<.0001
WY51	1	15826	2360.00177	6.71	<.0001
WY52	1	12113	2370.06435	5.11	<.0001
H18_WY14	1	-15651	7753.21962	-2.02	0.0435
H18_WY15	1	-12813	7762.06463	-1.65	0.0988
H18_WY16	1	-16050	7758.67512	-2.07	0.0386
H19_WY15	1	-13715	7731.26418	-1.77	0.0761
H19_WY16	1	-13357	7730.33104	-1.73	0.0840

OREGON APPENDIX

Oregon Appendix

Weather Impacts for each of the hourly models





Model Statistics by Month, Hour & Day of Week

Oregon **Model Statistics**

Month of Year	*Final Model*	*Original Model*	*Final Model*	*Original Model*	*Final Model*	*Original Model*
2002 Stats	Mean Calibrated Estimate % Error	Mean Calibrated % Error	Mean Calibrated ABS % Error	Mean ABS Calibrated % Error	Sum Tmp Impact	Sum Weather Impact
Jan	-2.2%	-1.8%	4.2%	4.6%	8,038,658	6,545,713
Feb	-3.0%	-5.0%	4.1%	5.2%	20,916,472	7,998,245
Mar	-0.2%	1.0%	2.9%	5.4%	(13,719,068)	325,220
Apr	-0.7%	-1.3%	3.3%	4.9%	743,561	(1,477,512)
May	2.5%	2.3%	4.3%	4.5%	(2,502,681)	(6,145,869)
Jun	0.5%	0.3%	3.0%	3.0%	(16,909,453)	(15,764,745)
Jul	3.4%	2.9%	4.4%	4.3%	(32,828,991)	(27,645,766)
Aug	2.5%	2.1%	3.6%	3.6%	(15,613,431)	(9,381,247)
Sep	3.3%	3.1%	4.3%	4.0%	(15,808,586)	(12,403,265)
Oct	-0.5%	0.9%	3.2%	4.4%	(15,577,088)	(644,913)
Nov	-2.2%	-3.8%	4.3%	5.3%	24,527,566	7,042,764
Dec	-2.3%	-3.3%	4.4%	4.9%	39,323,802	22,239,817
Grand Total	0.1%	-0.2%	3.8%	4.5%	(19,409,239)	(29,311,559)

Hours of Day	*Final Model*	*Original Model*	*Final Model*	*Original Model*	*Final Model*	*Original Model*
2002 Stats	Mean Calibrated Estimate % Error	Mean Calibrated % Error	Mean Calibrated ABS % Error	Mean ABS Calibrated % Error	Sum Tmp Impact	Sum Weather Impact
HR1	-3.1%	-0.3%	5.0%	5.3%	2,402,731	334,708
HR2	0.0%	-0.3%	4.5%	5.5%	2,018,504	576,786
HR3	-0.1%	-0.4%	4.2%	5.6%	1,797,944	514,453
HR4	-0.1%	-0.3%	4.1%	5.7%	1,434,436	825,619
HR5	-1.0%	0.0%	4.3%	5.6%	(919,084)	1,319,637
HR6	0.4%	0.0%	4.1%	5.5%	(564,320)	1,495,673
HR7	0.1%	-0.1%	4.3%	5.4%	(217,538)	248,691
HR8	-0.1%	-0.4%	4.0%	4.9%	1,294,982	(1,572,378)
HR9	0.1%	-0.2%	3.6%	4.3%	1,064,074	(3,272,668)
HR10	0.2%	-0.1%	3.2%	3.8%	906,480	(4,421,748)
HR11	0.2%	-0.1%	3.2%	3.5%	(255,636)	(5,029,769)
HR12	0.3%	0.0%	3.2%	3.6%	(2,126,380)	(4,949,881)
HR13	0.4%	0.0%	3.2%	3.7%	(4,243,598)	(4,827,257)
HR14	0.2%	-0.1%	3.2%	3.7%	(5,770,529)	(4,940,816)
HR15	0.3%	0.0%	3.4%	3.9%	(6,303,046)	(4,251,090)
HR16	0.2%	-0.1%	3.4%	4.1%	(7,090,966)	(3,804,501)
HR17	0.0%	-0.4%	3.6%	4.4%	(5,962,999)	(1,674,537)
HR18	0.1%	-0.4%	3.8%	4.9%	(3,668,653)	601,713
HR19	0.2%	-0.2%	3.4%	4.2%	(1,324,365)	2,619,370
HR20	0.3%	0.0%	3.3%	3.9%	(683,589)	2,004,909
HR21	0.2%	-0.1%	3.6%	4.0%	2,129,647	439,213
HR22	0.0%	-0.3%	3.5%	3.9%	2,153,839	(545,781)
HR23	0.1%	-0.2%	3.9%	4.1%	2,216,382	(704,938)
HR24	4.1%	-0.2%	5.8%	4.8%	2,302,443	(296,966)
Grand Total	0.1%	-0.2%	3.8%	4.5%	(19,409,239)	(29,311,559)

Day of Week	*Final Model*	*Original Model*	*Final Model*	*Original Model*	*Final Model*	*Original Model*
2002 Stats	Mean Calibrated Estimate % Error	Mean Calibrated % Error	Mean Calibrated ABS % Error	Mean ABS Calibrated % Error	Sum Tmp Impact	Sum Weather Impact
Sun	0.0%	-0.2%	3.9%	4.3%	3,030,963	1,453,642
Mon	-0.1%	-0.4%	4.2%	4.6%	(389,594)	(1,014,622)
Tue	0.3%	-0.1%	3.8%	4.3%	(8,618,421)	(6,244,899)
Wed	0.0%	-0.2%	3.5%	4.3%	(8,834,388)	(10,088,085)
Thu	0.2%	-0.1%	3.7%	4.5%	(5,427,965)	(7,328,629)
Fri	0.3%	0.0%	3.7%	4.7%	1,226,458	(1,927,736)
Sat	0.2%	-0.2%	4.0%	4.8%	(396,292)	(4,161,229)
Grand Total	0.1%	-0.2%	3.8%	4.5%	(19,409,239)	(29,311,559)

Oregon *Original* Hourly Splines & Variables

The REG Procedure
Model: MODEL1
Dependent Variable: OR

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	178	2.10222E15	1.181023E13	1466.46	<.0001
Error	26125	2.103998E14	8053582298		
Corrected Total	26303	2.31262E15			

Root MSE	89742	R-Square	0.9090
Dependent Mean	1711416	Adj R-Sq	0.9084
Coeff Var	5.24371		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-453372	49320	-9.19	<.0001
MFR_SUN	1	-35.33221	80.39063	-0.44	0.6603
OR_MA	1	1.15600	0.01380	83.78	<.0001
MFR_HDD	1	8150.78589	148.06780	55.05	<.0001
MFR_CDDS	1	-4567.69444	477.35176	-9.57	<.0001
MFR_CDD	1	9765.90423	186.29554	52.42	<.0001
MFR_S2_HCDD	1	1698.43978	233.80105	7.26	<.0001
S_1	1	-68192	8806.68976	-7.74	<.0001
S_2	1	37583	9997.84846	3.76	0.0002
H1	1	-117202	8856.69433	-13.23	<.0001
H2	1	-165733	8856.76490	-18.71	<.0001
H3	1	-195889	8858.25659	-22.11	<.0001
H4	1	-204472	8858.04041	-23.08	<.0001
H5	1	-165785	8863.18221	-18.70	<.0001
H6	1	-28426	8859.64865	-3.21	0.0013
H7	1	223775	8860.21851	25.26	<.0001
H8	1	394482	8856.61986	44.54	<.0001
H9	1	403730	8857.38857	45.58	<.0001
H10	1	387249	8865.24399	43.68	<.0001
H11	1	361800	8894.47601	40.68	<.0001
H12	1	319944	8952.01047	35.74	<.0001
H13	1	296622	9027.86700	32.86	<.0001
H14	1	278178	9111.49302	30.53	<.0001
H15	1	260964	9162.33856	28.48	<.0001
H16	1	247886	9173.10641	27.02	<.0001
H17	1	255922	9186.73828	27.86	<.0001
H18	1	272492	9102.10075	29.94	<.0001
H19	1	286733	8983.20211	31.92	<.0001
H20	1	305949	8925.73046	34.28	<.0001
H21	1	322652	8867.76520	36.38	<.0001
H22	1	285312	8859.76343	32.20	<.0001
H23	1	152412	8857.06254	17.21	<.0001
S_1_H1	1	3294.61181	9842.71768	0.33	0.7378

S_1_H2	1	8594.36092	9843.16008	0.87	0.3826
S_1_H3	1	20363	9845.29517	2.07	0.0386
S_1_H4	1	34550	9844.07548	3.51	0.0004
S_1_H5	1	50481	9849.03340	5.13	<.0001
S_1_H6	1	83604	9847.03502	8.49	<.0001
S_1_H7	1	135306	9847.07006	13.74	<.0001
S_1_H8	1	175694	9844.60903	17.85	<.0001
S_1_H9	1	167986	9843.51785	17.07	<.0001
S_1_H10	1	145875	9850.05003	14.81	<.0001
S_1_H11	1	129232	9879.58374	13.08	<.0001
S_1_H12	1	116890	9937.39308	11.76	<.0001
S_1_H13	1	107529	10012	10.74	<.0001
S_1_H14	1	97854	10093	9.70	<.0001
S_1_H15	1	80986	10144	7.98	<.0001
S_1_H16	1	71740	10152	7.07	<.0001
S_1_H17	1	108014	10233	10.56	<.0001
S_1_H18	1	177571	10147	17.50	<.0001
S_1_H19	1	198702	10037	19.80	<.0001
S_1_H20	1	154831	9955.80881	15.55	<.0001
S_1_H21	1	74615	9854.80794	7.57	<.0001
S_1_H22	1	10150	9846.16657	1.03	0.3026
S_1_H23	1	-3570.56771	9843.04811	-0.36	0.7168
S_2_H1	1	-5367.54493	11856	-0.45	0.6508
S_2_H2	1	-13732	11859	-1.16	0.2469
S_2_H3	1	-23998	11863	-2.02	0.0431
S_2_H4	1	-35949	11862	-3.03	0.0024
S_2_H5	1	-49096	11866	-4.14	<.0001
S_2_H6	1	-84931	11865	-7.16	<.0001
S_2_H7	1	-174528	11867	-14.71	<.0001
S_2_H8	1	-193969	11855	-16.36	<.0001
S_2_H9	1	-158177	11854	-13.34	<.0001
S_2_H10	1	-131555	11883	-11.07	<.0001
S_2_H11	1	-108903	11993	-9.08	<.0001
S_2_H12	1	-90556	12221	-7.41	<.0001
S_2_H13	1	-78834	12493	-6.31	<.0001
S_2_H14	1	-63109	12721	-4.96	<.0001
S_2_H15	1	-50172	12846	-3.91	<.0001
S_2_H16	1	-40119	12880	-3.11	0.0018
S_2_H17	1	-30339	12814	-2.37	0.0179
S_2_H18	1	-27235	12607	-2.16	0.0308
S_2_H19	1	-36320	12348	-2.94	0.0033
S_2_H20	1	-57234	12094	-4.73	<.0001
S_2_H21	1	-63394	11935	-5.31	<.0001
S_2_H22	1	-20173	11874	-1.70	0.0893
S_2_H23	1	1406.38261	11855	0.12	0.9056
D1	1	-19415	2073.43525	-9.36	<.0001
D2	1	-26092	4319.49900	-6.04	<.0001
D3	1	-11529	4456.21753	-2.59	0.0097
D4	1	-13592	4501.74156	-3.02	0.0025
D5	1	-21850	4432.12472	-4.93	<.0001
D6	1	-52752	4456.30294	-11.84	<.0001
WE	1	-111717	7026.84564	-15.90	<.0001
WE_H1	1	54868	8294.72042	6.61	<.0001
WE_H2	1	50426	8294.78585	6.08	<.0001
WE_H3	1	49567	8299.07456	5.97	<.0001
WE_H4	1	45110	8290.54651	5.44	<.0001
WE_H5	1	16885	8294.75225	2.04	0.0418
WE_H6	1	-79299	8294.82906	-9.56	<.0001
WE_H7	1	-258781	8295.14641	-31.20	<.0001

WE_H8	1	-317091	8294.70225	-38.23	<.0001
WE_H9	1	-206519	8294.78659	-24.90	<.0001
WE_H10	1	-131899	8294.97777	-15.90	<.0001
WE_H11	1	-108979	8295.05981	-13.14	<.0001
WE_H12	1	-102275	8294.96315	-12.33	<.0001
WE_H13	1	-118626	8295.30552	-14.30	<.0001
WE_H14	1	-138482	8295.51495	-16.69	<.0001
WE_H15	1	-143222	8295.21290	-17.27	<.0001
WE_H16	1	-131930	8295.06050	-15.90	<.0001
WE_H17	1	-119315	8295.71106	-14.38	<.0001
WE_H18	1	-102380	8295.63712	-12.34	<.0001
WE_H19	1	-93452	8295.79417	-11.26	<.0001
WE_H20	1	-82022	8295.58677	-9.89	<.0001
WE_H21	1	-68178	8295.00143	-8.22	<.0001
WE_H22	1	-50907	8294.86836	-6.14	<.0001
WE_H23	1	-25454	8294.90680	-3.07	0.0022
WY1	1	79304	7396.36205	10.72	<.0001
WY2	1	139680	6537.60133	21.37	<.0001
WY3	1	204056	6657.36431	30.65	<.0001
WY4	1	199728	6945.43412	28.76	<.0001
WY5	1	193894	7448.46422	26.03	<.0001
WY6	1	137469	8193.46093	16.78	<.0001
WY7	1	123111	9142.92980	13.47	<.0001
WY8	1	79632	10266	7.76	<.0001
WY9	1	133416	11566	11.54	<.0001
WY10	1	162673	13105	12.41	<.0001
WY11	1	193805	14537	13.33	<.0001
WY12	1	110224	15977	6.90	<.0001
WY13	1	43114	17442	2.47	0.0134
WY14	1	83032	18999	4.37	<.0001
WY15	1	56060	20508	2.73	0.0063
WY16	1	41522	21958	1.89	0.0586
WY17	1	-18108	23391	-0.77	0.4388
WY18	1	-121.13529	24400	-0.00	0.9960
WY19	1	-47164	25443	-1.85	0.0638
WY20	1	-37531	26611	-1.41	0.1584
WY21	1	-77977	27619	-2.82	0.0048
WY22	1	-72199	28490	-2.53	0.0113
WY23	1	-76654	29159	-2.63	0.0086
WY24	1	-43936	29533	-1.49	0.1368
WY25	1	-22546	29659	-0.76	0.4472
WY26	1	-40675	29662	-1.37	0.1703
WY27	1	-88686	29415	-3.01	0.0026
WY28	1	-51953	28897	-1.80	0.0722
WY29	1	-45411	28188	-1.61	0.1072
WY30	1	-11046	27316	-0.40	0.6859
WY31	1	-17258	26267	-0.66	0.5112
WY32	1	2003.66635	25140	0.08	0.9365
WY33	1	9017.05935	23958	0.38	0.7066
WY34	1	-40719	22667	-1.80	0.0724
WY35	1	-23012	21304	-1.08	0.2801
WY36	1	-60740	19741	-3.08	0.0021
WY37	1	-83543	18424	-4.53	<.0001
WY38	1	-68692	17055	-4.03	<.0001
WY39	1	-65203	15717	-4.15	<.0001
WY40	1	-73364	14135	-5.19	<.0001
WY41	1	-33296	13029	-2.56	0.0106
WY42	1	-43993	11726	-3.75	0.0002
WY43	1	-37059	10531	-3.52	0.0004

WY44	1	42566	9385.09005	4.54	<.0001
WY45	1	-13836	8335.75247	-1.66	0.0970
WY46	1	-3869.35530	7587.06412	-0.51	0.6101
WY47	1	50645	7004.09932	7.23	<.0001
WY48	1	125498	6737.18838	18.63	<.0001
WY49	1	101448	6535.17377	15.52	<.0001
WY50	1	156910	6494.89349	24.16	<.0001
WY51	1	178748	6502.76860	27.49	<.0001
WY52	1	86784	6509.51275	13.33	<.0001
H17_WY14	1	-122698	20437	-6.00	<.0001
H17_WY15	1	-90547	20462	-4.43	<.0001
H17_WY16	1	-95023	20461	-4.64	<.0001
H17_WY17	1	-65688	20460	-3.21	0.0013
H18_WY14	1	-189657	20433	-9.28	<.0001
H18_WY15	1	-164692	20458	-8.05	<.0001
H18_WY16	1	-172102	20459	-8.41	<.0001
H18_WY17	1	-148328	20455	-7.25	<.0001
H19_WY14	1	-165015	20430	-8.08	<.0001
H19_WY15	1	-200348	20454	-9.79	<.0001
H19_WY16	1	-206251	20452	-10.08	<.0001
H19_WY17	1	-187684	20452	-9.18	<.0001
H17_WY18	1	-97746	20377	-4.80	<.0001
H18_WY18	1	-139835	20375	-6.86	<.0001
H19_WY18	1	-152981	20375	-7.51	<.0001
H20_WY15	1	-143975	20439	-7.04	<.0001
H20_WY16	1	-158881	20437	-7.77	<.0001
H20_WY17	1	-156775	20437	-7.67	<.0001
H20_WY18	1	-137705	20367	-6.76	<.0001

Oregon *Final* Hourly Splines & Variables

The REG Procedure
Model: MODEL1
Dependent Variable: OR

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	223	2.156438E15	9.670125E12	1614.76	<.0001
Error	26080	1.561821E14	5988576229		
Corrected Total	26303	2.31262E15			

Root MSE	77386	R-Square	0.9325
Dependent Mean	1711416	Adj R-Sq	0.9319
Coeff Var	4.52175		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-753806	33515	-22.49	<.0001
OR_MA	1	1.12590	0.01186	94.93	<.0001
MFR_SUN	1	132.54984	35.83795	3.70	0.0002
Day_MFR_Min	1	677.37399	164.14647	4.13	<.0001
MFR_CDD80Pl	1	4777.74746	553.50902	8.63	<.0001
MFRWD_CDD80Pl	1	4908.98983	496.52477	9.89	<.0001
lag3MFR_CDD85Pl	1	7878.36961	447.87347	17.59	<.0001
MFR_CDD65Pl	1	4359.90373	195.84984	22.26	<.0001
LagDay_MFR_Max	1	-4360.49372	131.14170	-33.25	<.0001
MFR_HDD57Le	1	7913.16579	192.71036	41.06	<.0001
MFRWD_HDD57Le	1	1286.16611	168.85503	7.62	<.0001
MFR_HDD37Le	1	4664.11315	387.72000	12.03	<.0001
MFRWD_HDD22Le	1	84417	26150	3.23	0.0012
MFR_S2_HCDD	1	1583.80729	196.53336	8.06	<.0001
S_1	1	107284	11116	9.65	<.0001
M1	1	319391	12824	24.91	<.0001
M2	1	259562	11769	22.05	<.0001
M3	1	324950	13544	23.99	<.0001
M5	1	144816	8248.37756	17.56	<.0001
M6	1	169338	8115.85558	20.87	<.0001
M7	1	85267	6520.06162	13.08	<.0001
M8	1	47580	5013.31199	9.49	<.0001
M10	1	-115055	8542.63496	-13.47	<.0001
M11	1	126997	13443	9.45	<.0001
M12	1	127340	13343	9.54	<.0001
D2	1	24852	4426.35199	5.61	<.0001
D3	1	40931	4715.51112	8.68	<.0001
D4	1	42635	4713.55676	9.05	<.0001
D5	1	39145	4701.48792	8.33	<.0001
D6	1	7385.80391	4739.18535	1.56	0.1191
D7	1	23881	3565.82101	6.70	<.0001
D2_S1	1	-44498	4175.48220	-10.66	<.0001

D3_S1	1	-50837	4287.75767	-11.86	<.0001
D4_S1	1	-53704	4288.13045	-12.52	<.0001
D5_S1	1	-60324	4264.62633	-14.15	<.0001
D6_S1	1	-55892	4272.71166	-13.08	<.0001
D7_S1	1	-17271	4285.34208	-4.03	<.0001
D7_S2	1	26684	4290.34723	6.22	<.0001
H2	1	-101832	2946.56138	-34.56	<.0001
H3	1	-124578	3283.55525	-37.94	<.0001
H4	1	-127929	3283.77177	-38.96	<.0001
H7	1	271115	7324.25339	37.02	<.0001
H8	1	435315	7323.50997	59.44	<.0001
H9	1	455864	7323.50591	62.25	<.0001
H10	1	459477	7335.50840	62.64	<.0001
H11	1	461215	5901.69214	78.15	<.0001
H12	1	429878	5983.23348	71.85	<.0001
H13	1	412060	6072.98694	67.85	<.0001
H14	1	395358	6164.41672	64.14	<.0001
H15	1	386349	7738.43361	49.93	<.0001
H16	1	372628	7737.37270	48.16	<.0001
H17	1	375883	7679.17543	48.95	<.0001
H18	1	369954	6104.31066	60.61	<.0001
H19	1	357117	7521.43009	47.48	<.0001
H20	1	337853	5161.65888	65.45	<.0001
H21	1	370588	4901.13010	75.61	<.0001
H22	1	372262	3412.53624	109.09	<.0001
H23	1	230241	3402.42281	67.67	<.0001
M3_H1	1	-88817	11349	-7.83	<.0001
M3_H2	1	-31036	11727	-2.65	0.0081
M3_H3	1	-29903	11816	-2.53	0.0114
M3_H4	1	-24387	11816	-2.06	0.0390
M3_H5	1	-26861	12085	-2.22	0.0262
M3_H6	1	-30161	12086	-2.50	0.0126
M3_H7	1	-28325	12089	-2.34	0.0191
M3_H8	1	-32574	12085	-2.70	0.0070
M3_H9	1	-53166	12465	-4.27	<.0001
M3_H10	1	-72901	12468	-5.85	<.0001
M3_H11	1	-84771	12477	-6.79	<.0001
M3_H12	1	-86715	12484	-6.95	<.0001
M3_H13	1	-87944	12487	-7.04	<.0001
M3_H14	1	-84915	12094	-7.02	<.0001
M3_H15	1	-88841	12093	-7.35	<.0001
M3_H16	1	-98558	12248	-8.05	<.0001
M3_H17	1	-145876	12253	-11.91	<.0001
M3_H18	1	-223740	12336	-18.14	<.0001
M3_H19	1	-149325	12388	-12.05	<.0001
M3_H20	1	-71720	12248	-5.86	<.0001
M3_H21	1	-60854	12085	-5.04	<.0001
M3_H22	1	-57626	11731	-4.91	<.0001
M3_H23	1	-65615	11727	-5.60	<.0001
M4_H9	1	-16019	9838.83411	-1.63	0.1035
M4_H10	1	-20403	9863.02662	-2.07	0.0386
M4_H11	1	-26216	9874.92062	-2.65	0.0079
M4_H12	1	-30328	9874.97430	-3.07	0.0021
M4_H13	1	-31619	9870.86397	-3.20	0.0014
M4_H14	1	-29827	9370.98932	-3.18	0.0015
M4_H15	1	-37436	9372.45774	-3.99	<.0001
M4_H16	1	-54116	9578.37416	-5.65	<.0001
M4_H17	1	-112860	9579.28985	-11.78	<.0001
M4_H18	1	-209502	10000	-20.95	<.0001

M4_H19	1	-155809	25002	-6.23	<.0001
M4_H20	1	-149892	9563.17830	-15.67	<.0001
M4_H21	1	-21959	9362.55242	-2.35	0.0190
M5_H5	1	-75795	8629.14564	-8.78	<.0001
M5_H6	1	69707	8626.71263	8.08	<.0001
M5_H7	1	61682	10831	5.69	<.0001
M5_H8	1	78710	10832	7.27	<.0001
M5_H9	1	61474	10832	5.68	<.0001
M5_H10	1	35106	10829	3.24	0.0012
M5_H15	1	-20579	10878	-1.89	0.0585
M5_H16	1	-27027	10880	-2.48	0.0130
M5_H17	1	-36550	10856	-3.37	0.0008
M9_H19	1	49453	10982	4.50	<.0001
M9_H20	1	109214	9522.49854	11.47	<.0001
M9_H21	1	106796	9477.69046	11.27	<.0001
M10_H5	1	-20345	9269.49283	-2.19	0.0282
M10_H6	1	-38577	9272.79329	-4.16	<.0001
M10_H7	1	-65947	9280.23136	-7.11	<.0001
M10_H8	1	-47304	9268.08495	-5.10	<.0001
M10_H9	1	-46755	9744.94581	-4.80	<.0001
M10_H10	1	-38301	9753.28586	-3.93	<.0001
M10_H11	1	-29537	9762.94785	-3.03	0.0025
M10_H12	1	-24032	9764.11037	-2.46	0.0139
M10_H13	1	-20631	9765.48957	-2.11	0.0346
M10_H16	1	-19370	9503.85063	-2.04	0.0416
M10_H17	1	-62026	9488.89748	-6.54	<.0001
M10_H18	1	-136701	9464.84190	-14.44	<.0001
M10_H19	1	-104409	9463.06355	-11.03	<.0001
M10_H20	1	-17793	9458.02652	-1.88	0.0599
M11_H9	1	-20619	9664.47236	-2.13	0.0329
M11_H10	1	-25274	9664.36474	-2.62	0.0089
M11_H11	1	-27844	9664.70367	-2.88	0.0040
M11_H12	1	-21279	9665.59233	-2.20	0.0277
M11_H13	1	-16025	9666.02097	-1.66	0.0974
S_1_H5	1	-68248	4476.55130	-15.25	<.0001
S_1_H6	1	95165	4480.48234	21.24	<.0001
S_1_H7	1	134604	8035.77054	16.75	<.0001
S_1_H8	1	192881	8030.97165	24.02	<.0001
S_1_H9	1	198164	8588.99241	23.07	<.0001
S_1_H10	1	172823	8595.35115	20.11	<.0001
S_1_H11	1	140652	7408.18680	18.99	<.0001
S_1_H12	1	123029	7486.42970	16.43	<.0001
S_1_H13	1	109898	7575.21827	14.51	<.0001
S_1_H14	1	92049	6996.53692	13.16	<.0001
S_1_H15	1	68458	8415.25662	8.14	<.0001
S_1_H16	1	65412	8667.82852	7.55	<.0001
S_1_H17	1	112803	8600.77706	13.12	<.0001
S_1_H18	1	230447	7201.44853	32.00	<.0001
S_1_H19	1	259281	8433.21650	30.75	<.0001
S_1_H20	1	223403	6414.87370	34.83	<.0001
S_1_H21	1	118105	5907.69201	19.99	<.0001
S_2_H3	1	-27837	6235.58556	-4.46	<.0001
S_2_H4	1	-47012	6240.85739	-7.53	<.0001
S_2_H5	1	-172046	6000.14409	-28.67	<.0001
S_2_H6	1	-63271	5863.79371	-10.79	<.0001
S_2_H7	1	-159395	8842.26708	-18.03	<.0001
S_2_H8	1	-160029	8835.35390	-18.11	<.0001
S_2_H9	1	-117995	8830.70456	-13.36	<.0001
S_2_H10	1	-92928	8853.62546	-10.50	<.0001

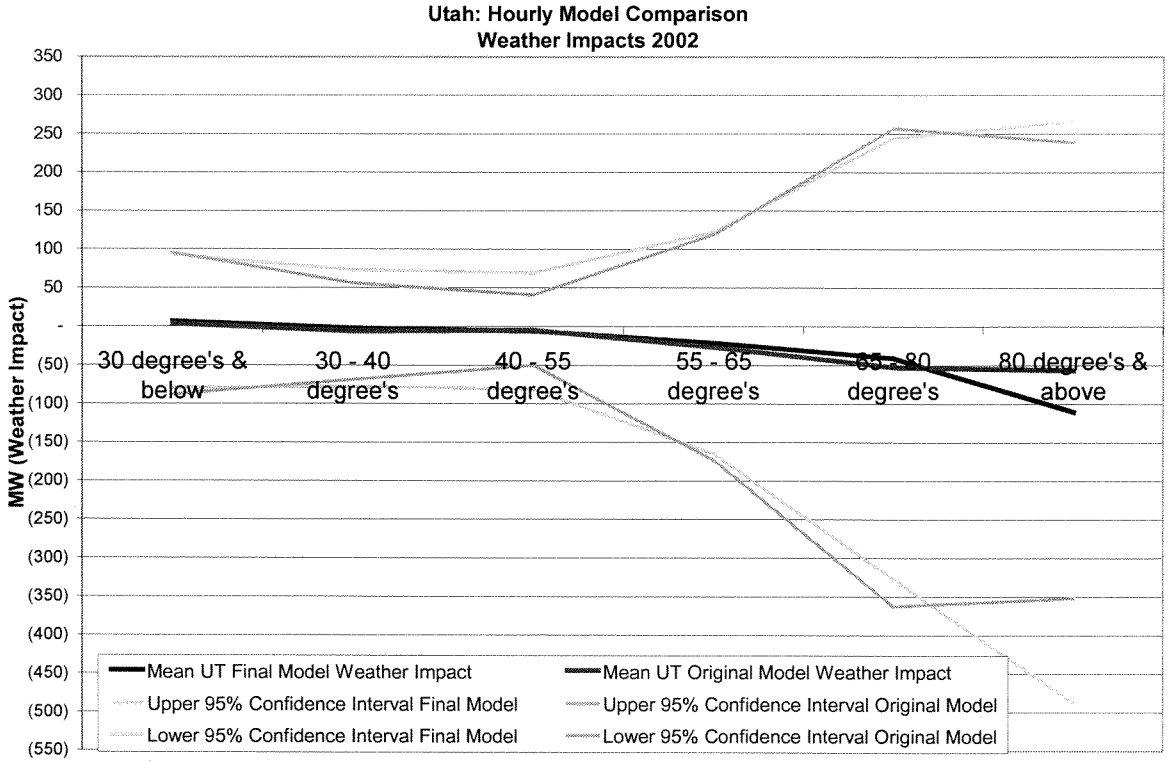
S_2_H11	1	-83227	7759.67385	-10.73	<.0001
S_2_H12	1	-69642	7988.85173	-8.72	<.0001
S_2_H13	1	-64286	8275.14398	-7.77	<.0001
S_2_H14	1	-56578	8519.23719	-6.64	<.0001
S_2_H15	1	-60646	9750.23792	-6.22	<.0001
S_2_H16	1	-62097	9766.87534	-6.36	<.0001
S_2_H17	1	-58153	9671.79653	-6.01	<.0001
S_2_H18	1	-36814	8332.32615	-4.42	<.0001
S_2_H19	1	-20928	9324.16734	-2.24	0.0248
WE	1	-50449	4446.42769	-11.35	<.0001
WE_H5	1	-40048	5381.72933	-7.44	<.0001
WE_H6	1	-112843	5382.77803	-20.96	<.0001
WE_H7	1	-298723	5540.35814	-53.92	<.0001
WE_H8	1	-360725	5537.27602	-65.14	<.0001
WE_H9	1	-253976	5540.37772	-45.84	<.0001
WE_H10	1	-180796	5550.55987	-32.57	<.0001
WE_H11	1	-157711	5572.15104	-28.30	<.0001
WE_H12	1	-149542	5604.41411	-26.68	<.0001
WE_H13	1	-163767	5654.86454	-28.96	<.0001
WE_H14	1	-179596	5716.64244	-31.42	<.0001
WE_H15	1	-182880	5771.94945	-31.68	<.0001
WE_H16	1	-170084	5788.08325	-29.39	<.0001
WE_H17	1	-157505	5747.27381	-27.41	<.0001
WE_H18	1	-144695	5665.65085	-25.54	<.0001
WE_H19	1	-138592	5603.20257	-24.73	<.0001
WE_H20	1	-127773	5572.18426	-22.93	<.0001
WE_H21	1	-117649	5555.47892	-21.18	<.0001
WE_H22	1	-97375	5545.82739	-17.56	<.0001
WE_H23	1	-71487	5540.10645	-12.90	<.0001
WY3	1	18684	4149.72653	4.50	<.0001
WY4	1	30883	4140.51168	7.46	<.0001
WY6	1	34496	4360.94083	7.91	<.0001
WY7	1	51585	4450.60271	11.59	<.0001
WY9	1	23831	4087.11430	5.83	<.0001
WY13	1	-65240	4249.37710	-15.35	<.0001
WY14	1	-38253	6029.50851	-6.34	<.0001
WY15	1	-53079	7677.22045	-6.91	<.0001
WY16	1	-76865	7809.27979	-9.84	<.0001
WY17	1	-118774	7992.67942	-14.86	<.0001
WY18	1	-115450	7852.57044	-14.70	<.0001
WY19	1	-142083	8510.28049	-16.70	<.0001
WY20	1	-141647	8726.89725	-16.23	<.0001
WY21	1	-181145	8818.88310	-20.54	<.0001
WY22	1	-183299	8606.74219	-21.30	<.0001
WY23	1	-195951	8259.95633	-23.72	<.0001
WY24	1	-167594	8438.99919	-19.86	<.0001
WY25	1	-121588	8363.38723	-14.54	<.0001
WY26	1	-134475	8342.01847	-16.12	<.0001
WY27	1	-127483	5844.96270	-21.81	<.0001
WY28	1	-72250	5438.62857	-13.28	<.0001
WY29	1	-48410	5336.53512	-9.07	<.0001
WY30	1	-14271	5279.16473	-2.70	0.0069
WY32	1	29721	4490.84410	6.62	<.0001
WY33	1	38769	4643.17359	8.35	<.0001
WY35	1	25858	4402.07713	5.87	<.0001
WY36	1	-6607.29808	4028.73023	-1.64	0.1010
WY37	1	-23644	4162.22161	-5.68	<.0001
WY41	1	17717	4488.36776	3.95	<.0001
WY42	1	9768.53691	4390.45272	2.22	0.0261

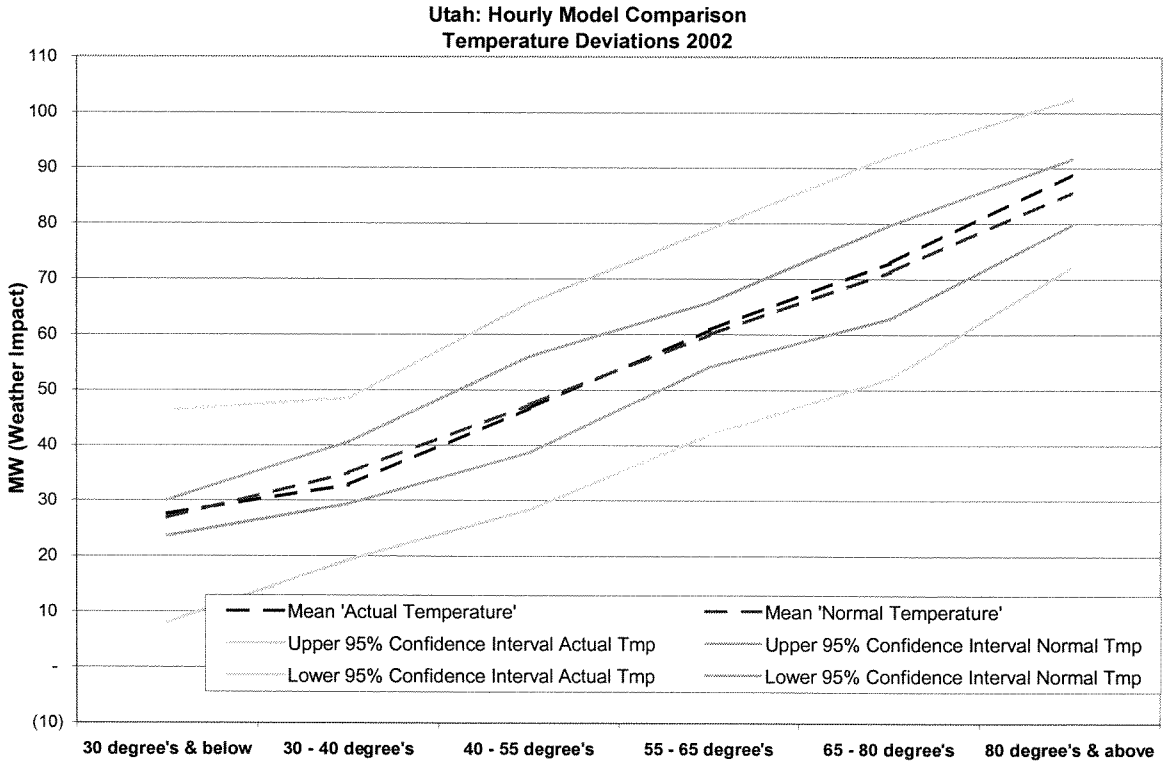
WY44	1	88182	4490.04740	19.64	<.0001
WY45	1	71555	5856.38932	12.22	<.0001
WY46	1	65628	6397.14177	10.26	<.0001
WY47	1	96658	6493.59841	14.89	<.0001
WY48	1	161475	6485.50800	24.90	<.0001
WY49	1	122253	5157.86382	23.70	<.0001
WY50	1	177110	5358.63586	33.05	<.0001
WY51	1	212390	5381.46669	39.47	<.0001
WY52	1	129297	5357.00262	24.14	<.0001
H18_WY14	1	-31492	18501	-1.70	0.0887
H19_WY14	1	-53971	24249	-2.23	0.0260
H19_WY15	1	-75183	30016	-2.50	0.0123
H19_WY16	1	-81432	30016	-2.71	0.0067
H19_WY17	1	-64587	30015	-2.15	0.0314
H19_WY18	1	-68059	22700	-3.00	0.0027

UTAH APPENDIX

Utah Appendix

Weather Impacts for each of the hourly models





Model Statistics by Month, Hour & Day of Week

Utah **Model Statistics**

Month of Year	*Final Model*	*Original Model*	*Final Model*	*Original Model*	*Final Model*	*Original Model*
2002 Stats	Mean Calibrated Estimate % Error	Mean Calibrated % Error	Mean Calibrated ABS % Error	Mean ABS Calibrated % Error	Sum Tmp Impact	Sum Weather Impact
Jan	-0.7%	-0.8%	2.1%	2.3%	(2,418,992)	(4,784,168)
Feb	0.2%	0.2%	1.5%	1.9%	(17,206,834)	(20,515,452)
Mar	-0.1%	0.5%	2.2%	3.4%	(8,906,442)	(276,345)
Apr	-1.2%	-1.5%	2.2%	2.5%	(8,087,391)	402,072
May	-1.9%	-2.5%	3.3%	3.8%	(26,478,498)	(41,112,042)
Jun	0.7%	0.4%	2.7%	3.0%	(51,667,578)	(49,823,937)
Jul	2.2%	2.3%	3.6%	3.7%	(85,596,665)	(70,753,410)
Aug	0.4%	-0.1%	2.3%	2.5%	4,621,907	3,425,883
Sep	-1.1%	-1.3%	3.0%	3.4%	(11,223,739)	(12,714,656)
Oct	-1.4%	-1.6%	2.2%	2.5%	(3,274,529)	269,317
Nov	0.1%	0.3%	1.8%	2.3%	(3,459,155)	(8,317,806)
Dec	1.1%	0.8%	2.9%	3.4%	25,653,733	20,192,308
Grand Total	-0.1%	-0.3%	2.5%	2.9%	(188,044,183)	(184,008,234)

Hours of Day	*Final Model*	*Original Model*	*Final Model*	*Original Model*	*Final Model*	*Original Model*
2002 Stats	Mean Calibrated Estimate % Error	Mean Calibrated % Error	Mean Calibrated ABS % Error	Mean ABS Calibrated % Error	Sum Tmp Impact	Sum Weather Impact
HR1	-1.1%	-0.5%	2.9%	3.1%	(2,436,385)	(5,308,256)
HR2	-0.5%	-0.4%	2.6%	3.1%	(1,835,102)	(4,264,424)
HR3	-0.6%	-0.5%	2.5%	3.0%	(2,370,123)	(5,157,828)
HR4	-0.6%	-0.5%	2.6%	2.9%	(1,914,457)	(4,200,544)
HR5	-0.7%	-0.6%	2.6%	2.8%	(4,023,303)	(4,427,045)
HR6	-0.6%	-0.8%	2.5%	3.1%	(3,339,551)	(5,323,246)
HR7	-0.1%	-0.5%	2.5%	2.9%	(6,404,670)	(11,599,646)
HR8	-0.1%	-0.5%	2.1%	2.5%	(10,275,582)	(16,030,524)
HR9	-0.1%	-0.2%	1.9%	2.5%	(11,675,855)	(17,085,987)
HR10	0.0%	-0.1%	2.0%	2.6%	(14,481,504)	(17,919,163)
HR11	0.1%	-0.1%	2.0%	2.6%	(16,693,421)	(17,529,127)
HR12	0.2%	0.1%	2.1%	2.6%	(17,087,919)	(15,045,893)
HR13	0.2%	0.2%	2.3%	2.7%	(16,966,477)	(12,847,269)
HR14	0.1%	0.1%	2.4%	2.7%	(16,519,428)	(11,028,478)
HR15	0.1%	-0.1%	2.6%	2.9%	(15,946,704)	(9,979,690)
HR16	0.1%	-0.3%	2.7%	3.0%	(13,912,437)	(7,833,447)
HR17	0.2%	-0.9%	2.8%	3.6%	(11,639,395)	(5,892,543)
HR18	0.2%	-0.6%	2.7%	3.5%	(7,963,585)	(2,247,392)
HR19	0.3%	-0.2%	2.6%	3.0%	(3,727,851)	2,503,652
HR20	0.2%	-0.3%	2.6%	3.1%	(950,434)	3,707,212
HR21	0.0%	-0.4%	2.6%	2.8%	(669,411)	(1,740,273)
HR22	-0.1%	-0.5%	2.7%	2.9%	(2,093,180)	(4,360,827)
HR23	-0.6%	-0.7%	2.8%	3.1%	(2,419,336)	(4,980,453)
HR24	0.1%	-0.6%	2.8%	3.7%	(2,698,072)	(5,417,042)
Grand Total	-0.1%	-0.4%	2.5%	2.9%	(188,044,183)	(184,008,234)

Day of Week	*Final Model*	*Original Model*	*Final Model*	*Original Model*	*Final Model*	*Original Model*
2002 Stats	Mean Calibrated Estimate % Error	Mean Calibrated % Error	Mean Calibrated ABS % Error	Mean ABS Calibrated % Error	Sum Tmp Impact	Sum Weather Impact
Sun	-0.5%	-0.5%	2.9%	3.7%	(29,978,869)	(23,121,767)
Mon	-0.3%	-0.4%	2.7%	3.2%	(28,697,739)	(26,849,686)
Tue	0.2%	-0.2%	2.4%	2.7%	(24,302,554)	(26,960,289)
Wed	0.0%	-0.1%	2.4%	2.7%	(26,329,350)	(28,389,075)
Thu	0.0%	-0.2%	2.2%	2.3%	(21,809,928)	(25,641,677)
Fri	-0.1%	-0.3%	2.4%	3.0%	(29,470,991)	(27,366,746)
Sat	-0.3%	-0.7%	2.4%	3.2%	(27,454,752)	(25,678,994)
Grand Total	-0.1%	-0.4%	2.5%	2.9%	(188,044,183)	(184,008,234)

Utah *Original* Hourly Splines & Variables

The REG Procedure
Model: MODEL1
Dependent Variable: UT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	178	3.823946E15	2.148284E13	2701.90	<.0001
Error	26125	2.077206E14	7951026861		
Corrected Total	26303	4.031666E15			

Root MSE	89169	R-Square	0.9485
Dependent Mean	2322485	Adj R-Sq	0.9481
Coeff Var	3.83936		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	1151332	51438	22.38	<.0001
SLC_SUN	1	1621.66020	89.29322	18.16	<.0001
UT_MA	1	-0.03283	0.01346	-2.44	0.0148
SLC_HDD	1	4826.64279	118.48509	40.74	<.0001
SLC_CDDS	1	1830.09695	569.25064	3.21	0.0013
SLC_CDD	1	24013	175.57156	136.77	<.0001
SLC_S2_HCDD	1	-3148.00967	142.36086	-22.11	<.0001
S_1	1	-25659	8769.69523	-2.93	0.0034
S_2	1	38392	10027	3.83	0.0001
H1	1	-89215	8800.35644	-10.14	<.0001
H2	1	-128475	8800.36423	-14.60	<.0001
H3	1	-142267	8800.85532	-16.17	<.0001
H4	1	-112259	8801.12999	-12.76	<.0001
H5	1	-3760.08721	8803.88175	-0.43	0.6693
H6	1	177505	8803.43731	20.16	<.0001
H7	1	327029	8800.51459	37.16	<.0001
H8	1	413478	8801.56395	46.98	<.0001
H9	1	466951	8812.36197	52.99	<.0001
H10	1	491142	8841.19138	55.55	<.0001
H11	1	491177	8879.46343	55.32	<.0001
H12	1	486278	8910.01625	54.58	<.0001
H13	1	496329	8940.10702	55.52	<.0001
H14	1	501533	8958.63230	55.98	<.0001
H15	1	499401	8972.90480	55.66	<.0001
H16	1	495302	8970.93506	55.21	<.0001
H17	1	474597	8994.12549	52.77	<.0001
H18	1	451921	8946.95908	50.51	<.0001
H19	1	469666	8884.86751	52.86	<.0001
H20	1	524243	8853.85349	59.21	<.0001
H21	1	536875	8803.75082	60.98	<.0001
H22	1	359467	8801.21732	40.84	<.0001
H23	1	145791	8800.17429	16.57	<.0001
S_1_H1	1	14023	9779.94436	1.43	0.1516

S_1_H2	1	26369	9780.04066	2.70	0.0070
S_1_H3	1	36057	9781.25162	3.69	0.0002
S_1_H4	1	40856	9780.00178	4.18	<.0001
S_1_H5	1	47351	9783.23338	4.84	<.0001
S_1_H6	1	88566	9782.35831	9.05	<.0001
S_1_H7	1	111656	9780.75962	11.42	<.0001
S_1_H8	1	92197	9781.74833	9.43	<.0001
S_1_H9	1	81732	9792.63954	8.35	<.0001
S_1_H10	1	85617	9823.25367	8.72	<.0001
S_1_H11	1	83841	9863.20889	8.50	<.0001
S_1_H12	1	73966	9896.62420	7.47	<.0001
S_1_H13	1	64768	9926.77731	6.52	<.0001
S_1_H14	1	41350	9946.91960	4.16	<.0001
S_1_H15	1	21969	9958.50274	2.21	0.0274
S_1_H16	1	23654	9955.07539	2.38	0.0175
S_1_H17	1	131405	10043	13.08	<.0001
S_1_H18	1	214607	9993.83618	21.47	<.0001
S_1_H19	1	193891	9933.28413	19.52	<.0001
S_1_H20	1	89714	9876.51881	9.08	<.0001
S_1_H21	1	-20568	9784.04345	-2.10	0.0355
S_1_H22	1	-32055	9781.06752	-3.28	0.0010
S_1_H23	1	-16030	9779.91043	-1.64	0.1012
S_2_H1	1	-26512	11776	-2.25	0.0244
S_2_H2	1	-40624	11780	-3.45	0.0006
S_2_H3	1	-49483	11785	-4.20	<.0001
S_2_H4	1	-56378	11791	-4.78	<.0001
S_2_H5	1	-63246	11805	-5.36	<.0001
S_2_H6	1	-104042	11805	-8.81	<.0001
S_2_H7	1	-157338	11781	-13.35	<.0001
S_2_H8	1	-134357	11779	-11.41	<.0001
S_2_H9	1	-89943	11801	-7.62	<.0001
S_2_H10	1	-31793	11841	-2.69	0.0073
S_2_H11	1	17891	11884	1.51	0.1322
S_2_H12	1	61761	11918	5.18	<.0001
S_2_H13	1	101263	11937	8.48	<.0001
S_2_H14	1	133104	11949	11.14	<.0001
S_2_H15	1	148363	11965	12.40	<.0001
S_2_H16	1	161039	11975	13.45	<.0001
S_2_H17	1	157373	11995	13.12	<.0001
S_2_H18	1	132329	11968	11.06	<.0001
S_2_H19	1	76238	11906	6.40	<.0001
S_2_H20	1	25228	11843	2.13	0.0332
S_2_H21	1	39605	11790	3.36	0.0008
S_2_H22	1	54743	11781	4.65	<.0001
S_2_H23	1	26708	11777	2.27	0.0233
D1	1	-72192	2060.51249	-35.04	<.0001
D2	1	-58405	4290.75564	-13.61	<.0001
D3	1	-53673	4427.26404	-12.12	<.0001
D4	1	-65727	4473.15348	-14.69	<.0001
D5	1	-50484	4403.72987	-11.46	<.0001
D6	1	-89867	4426.21855	-20.30	<.0001
WE	1	-106802	6982.68509	-15.30	<.0001
WE_H1	1	32725	8241.78896	3.97	<.0001
WE_H2	1	22355	8241.76007	2.71	0.0067
WE_H3	1	8622.21012	8246.10694	1.05	0.2958
WE_H4	1	-18798	8237.70122	-2.28	0.0225
WE_H5	1	-100526	8241.99916	-12.20	<.0001
WE_H6	1	-253682	8242.08686	-30.78	<.0001
WE_H7	1	-356879	8242.34197	-43.30	<.0001

WE_H8	1	-349482	8241.95719	-42.40	<.0001
WE_H9	1	-330082	8242.49221	-40.05	<.0001
WE_H10	1	-314461	8242.21205	-38.15	<.0001
WE_H11	1	-308348	8242.79071	-37.41	<.0001
WE_H12	1	-293113	8242.82365	-35.56	<.0001
WE_H13	1	-308564	8243.08496	-37.43	<.0001
WE_H14	1	-304285	8243.09550	-36.91	<.0001
WE_H15	1	-287548	8242.66666	-34.89	<.0001
WE_H16	1	-251050	8242.80467	-30.46	<.0001
WE_H17	1	-208602	8243.70999	-25.30	<.0001
WE_H18	1	-180242	8243.47323	-21.86	<.0001
WE_H19	1	-158167	8243.21727	-19.19	<.0001
WE_H20	1	-138275	8242.80243	-16.78	<.0001
WE_H21	1	-109924	8242.13272	-13.34	<.0001
WE_H22	1	-56292	8241.99890	-6.83	<.0001
WE_H23	1	-22977	8242.24551	-2.79	0.0053
WY1	1	23115	7336.74717	3.15	0.0016
WY2	1	26722	6541.78736	4.08	<.0001
WY3	1	44354	6710.09010	6.61	<.0001
WY4	1	25456	7091.03350	3.59	0.0003
WY5	1	5167.39201	7627.08199	0.68	0.4981
WY6	1	-17800	8423.30821	-2.11	0.0346
WY7	1	-50552	9464.07736	-5.34	<.0001
WY8	1	-87464	10696	-8.18	<.0001
WY9	1	-121109	12100	-10.01	<.0001
WY10	1	-203065	13841	-14.67	<.0001
WY11	1	-265181	15354	-17.27	<.0001
WY12	1	-386338	16883	-22.88	<.0001
WY13	1	-422481	18424	-22.93	<.0001
WY14	1	-428297	20058	-21.35	<.0001
WY15	1	-447855	21604	-20.73	<.0001
WY16	1	-484153	23145	-20.92	<.0001
WY17	1	-517263	24653	-20.98	<.0001
WY18	1	-522964	25720	-20.33	<.0001
WY19	1	-529873	26802	-19.77	<.0001
WY20	1	-556965	28012	-19.88	<.0001
WY21	1	-586868	29090	-20.17	<.0001
WY22	1	-555202	29978	-18.52	<.0001
WY23	1	-564450	30682	-18.40	<.0001
WY24	1	-577036	31039	-18.59	<.0001
WY25	1	-494841	31176	-15.87	<.0001
WY26	1	-500764	31212	-16.04	<.0001
WY27	1	-453243	30885	-14.68	<.0001
WY28	1	-437198	30340	-14.41	<.0001
WY29	1	-412053	29613	-13.91	<.0001
WY30	1	-383020	28694	-13.35	<.0001
WY31	1	-335241	27619	-12.14	<.0001
WY32	1	-282500	26448	-10.68	<.0001
WY33	1	-276011	25148	-10.98	<.0001
WY34	1	-301593	23758	-12.69	<.0001
WY35	1	-280093	22328	-12.54	<.0001
WY36	1	-303578	20654	-14.70	<.0001
WY37	1	-318046	19299	-16.48	<.0001
WY38	1	-335213	17868	-18.76	<.0001
WY39	1	-280085	16468	-17.01	<.0001
WY40	1	-247868	14827	-16.72	<.0001
WY41	1	-261435	13609	-19.21	<.0001
WY42	1	-265525	12240	-21.69	<.0001
WY43	1	-237156	10986	-21.59	<.0001

WY44	1	-147756	9727.94644	-15.19	<.0001
WY45	1	-73722	8548.91922	-8.62	<.0001
WY46	1	-19093	7643.30303	-2.50	0.0125
WY47	1	5577.27370	7040.38541	0.79	0.4283
WY48	1	81674	6707.92648	12.18	<.0001
WY49	1	105784	6553.85977	16.14	<.0001
WY50	1	152451	6464.48690	23.58	<.0001
WY51	1	159063	6448.25714	24.67	<.0001
WY52	1	115408	6449.74443	17.89	<.0001
H17_WY14	1	-145445	20300	-7.16	<.0001
H17_WY15	1	-151035	20328	-7.43	<.0001
H17_WY16	1	-126654	20324	-6.23	<.0001
H17_WY17	1	-117304	20322	-5.77	<.0001
H18_WY14	1	-202418	20300	-9.97	<.0001
H18_WY15	1	-250209	20323	-12.31	<.0001
H18_WY16	1	-223127	20320	-10.98	<.0001
H18_WY17	1	-223981	20320	-11.02	<.0001
H19_WY14	1	-96077	20297	-4.73	<.0001
H19_WY15	1	-249984	20328	-12.30	<.0001
H19_WY16	1	-248252	20319	-12.22	<.0001
H19_WY17	1	-256434	20329	-12.61	<.0001
H17_WY18	1	-67973	20252	-3.36	0.0008
H18_WY18	1	-139225	20245	-6.88	<.0001
H19_WY18	1	-178742	20247	-8.83	<.0001
H20_WY15	1	-67293	20308	-3.31	0.0009
H20_WY16	1	-88467	20305	-4.36	<.0001
H20_WY17	1	-99350	20306	-4.89	<.0001
H20_WY18	1	-90191	20236	-4.46	<.0001

Utah *Final* Hourly Splines & Variables

The REG Procedure
Model: MODEL1
Dependent Variable: UT

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	236	3.863561E15	1.637102E13	2538.54	<.0001
Error	26067	1.681058E14	6448989456		
Corrected Total	26303	4.031666E15			

Root MSE	80306	R-Square	0.9583
Dependent Mean	2322485	Adj R-Sq	0.9579
Coeff Var	3.45774		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	764431	46969	16.28	<.0001
UT_MA	1	0.01610	0.01171	1.37	0.1692
SLC_SUN	1	1134.34539	56.75655	19.99	<.0001
Day_SLC_Min	1	4325.88943	152.02280	28.46	<.0001
SLCWD_CDD90PlSq	1	380.69749	106.92636	3.56	0.0004
SLC_CDD85Pl	1	7028.19822	579.85245	12.12	<.0001
lag3SLC_CDD85Pl	1	4081.06754	530.33871	7.70	<.0001
SLC_CDD65Pl	1	15537	223.28543	69.59	<.0001
lag3SLC_CDD65Pl	1	4877.41191	216.49560	22.53	<.0001
SLC_CDD65_58	1	2735.60859	549.51098	4.98	<.0001
LagDay_SLC_Max	1	-3174.33429	155.09915	-20.47	<.0001
SLC_HDD57Le	1	2916.50766	183.77766	15.87	<.0001
SLCWD_HDD57Le	1	-485.34042	120.27574	-4.04	<.0001
SLC_HDD37Le	1	-1094.69025	249.52426	-4.39	<.0001
SLC_S2_HCDD	1	-2287.71020	131.43677	-17.41	<.0001
S_1	1	390993	14159	27.61	<.0001
S_2	1	22947	8674.88385	2.65	0.0082
M1	1	247977	14282	17.36	<.0001
M2	1	268963	13146	20.46	<.0001
M3	1	214598	11985	17.91	<.0001
M5	1	182484	11398	16.01	<.0001
M6	1	147052	11271	13.05	<.0001
M7	1	138093	10442	13.22	<.0001
M8	1	83500	9340.77534	8.94	<.0001
M10	1	-174783	10969	-15.93	<.0001
M11	1	149250	15303	9.75	<.0001
M12	1	199992	15013	13.32	<.0001
D2	1	52314	5245.21346	9.97	<.0001
D3	1	58075	5869.94904	9.89	<.0001
D4	1	56509	5852.25923	9.66	<.0001
D5	1	69684	5869.65813	11.87	<.0001
D6	1	27508	5875.72445	4.68	<.0001
D7	1	102171	4180.21498	24.44	<.0001

D2_S1	1	-63423	5070.77509	-12.51	<.0001
D3_S1	1	-64036	5188.23041	-12.34	<.0001
D4_S1	1	-76526	5204.47796	-14.70	<.0001
D5_S1	1	-76689	5238.85327	-14.64	<.0001
D6_S1	1	-75053	5261.65284	-14.26	<.0001
D7_S1	1	-45161	4886.05824	-9.24	<.0001
D2_S2	1	-25563	5854.78266	-4.37	<.0001
D3_S2	1	-25175	5820.27055	-4.33	<.0001
D4_S2	1	-42199	5789.05192	-7.29	<.0001
D5_S2	1	-35710	5830.62531	-6.12	<.0001
D6_S2	1	-41127	5862.80520	-7.01	<.0001
D7_S2	1	-15489	5886.05169	-2.63	0.0085
H2	1	-70954	3283.05297	-21.61	<.0001
H3	1	-104479	5845.60881	-17.87	<.0001
H4	1	-73672	6111.77372	-12.05	<.0001
H6	1	87895	13149	6.68	<.0001
H7	1	267134	13045	20.48	<.0001
H8	1	422594	13002	32.50	<.0001
H9	1	531808	6139.64695	86.62	<.0001
H10	1	581185	3697.47567	157.18	<.0001
H11	1	588307	3868.23150	152.09	<.0001
H12	1	575694	6282.54948	91.63	<.0001
H13	1	581719	6327.63753	91.93	<.0001
H14	1	598449	7933.75868	75.43	<.0001
H15	1	599976	7960.76837	75.37	<.0001
H16	1	564674	13166	42.89	<.0001
H17	1	540056	13171	41.00	<.0001
H18	1	495539	13160	37.65	<.0001
H19	1	442503	7894.89193	56.05	<.0001
H20	1	471256	7742.02731	60.87	<.0001
H21	1	593838	6123.90857	96.97	<.0001
H22	1	382244	3869.37718	98.79	<.0001
H23	1	176854	3866.99358	45.73	<.0001
M3_H1	1	-43760	8881.60323	-4.93	<.0001
M3_H7	1	-59021	9517.45187	-6.20	<.0001
M3_H8	1	-34173	9515.97361	-3.59	0.0003
M3_H16	1	-38309	9711.35104	-3.94	<.0001
M3_H17	1	-177856	10023	-17.74	<.0001
M3_H18	1	-204672	9715.44266	-21.07	<.0001
M3_H19	1	-80915	9705.31240	-8.34	<.0001
M3_H20	1	-62247	9509.25439	-6.55	<.0001
M3_H21	1	-61708	9383.17366	-6.58	<.0001
M3_H22	1	-66770	9199.12035	-7.26	<.0001
M3_H23	1	-44715	9199.42922	-4.86	<.0001
M4_H5	1	-31461	9708.79361	-3.24	0.0012
M4_H6	1	-41465	9695.86141	-4.28	<.0001
M4_H7	1	-78668	9694.56771	-8.11	<.0001
M4_H8	1	-37867	9690.01053	-3.91	<.0001
M4_H11	1	27328	9399.03904	2.91	0.0036
M4_H12	1	39416	9903.09571	3.98	<.0001
M4_H13	1	51013	9910.26032	5.15	<.0001
M4_H14	1	50527	9915.02075	5.10	<.0001
M4_H15	1	43411	9915.01986	4.38	<.0001
M4_H17	1	-177980	10226	-17.40	<.0001
M4_H18	1	-294897	9915.90564	-29.74	<.0001
M4_H19	1	-166419	19004	-8.76	<.0001
M4_H20	1	-81364	10808	-7.53	<.0001
M5_H6	1	94769	15400	6.15	<.0001
M5_H7	1	86982	15379	5.66	<.0001

M5_H8	1	53089	15367	3.45	0.0006
M5_H14	1	-40722	11240	-3.62	0.0003
M5_H15	1	-60198	11241	-5.36	<.0001
M5_H16	1	-44898	15376	-2.92	0.0035
M5_H17	1	-51306	15378	-3.34	0.0009
M5_H18	1	-51369	15377	-3.34	0.0008
M9_H6	1	142030	15476	9.18	<.0001
M9_H7	1	112872	15456	7.30	<.0001
M9_H8	1	47196	15452	3.05	0.0023
M9_H16	1	45854	15453	2.97	0.0030
M9_H17	1	43531	15455	2.82	0.0049
M9_H18	1	56884	15465	3.68	0.0002
M9_H19	1	129568	11404	11.36	<.0001
M9_H20	1	160130	11303	14.17	<.0001
M10_H5	1	-18451	9503.43421	-1.94	0.0522
M10_H10	1	53654	9176.36846	5.85	<.0001
M10_H11	1	48622	9254.24686	5.25	<.0001
M10_H12	1	71846	9738.25520	7.38	<.0001
M10_H13	1	86132	9740.20718	8.84	<.0001
M10_H14	1	89036	9742.46550	9.14	<.0001
M10_H15	1	95562	9742.68410	9.81	<.0001
M10_H16	1	64598	9732.94952	6.64	<.0001
M10_H17	1	-84514	10057	-8.40	<.0001
M10_H18	1	-160653	9730.76972	-16.51	<.0001
M10_H19	1	-43000	9718.78680	-4.42	<.0001
M11_H6	1	30608	9607.30338	3.19	0.0014
M11_H9	1	21426	9482.33807	2.26	0.0239
M11_H10	1	45427	9277.81648	4.90	<.0001
M11_H11	1	31320	9354.68170	3.35	0.0008
M11_H12	1	38770	9807.74471	3.95	<.0001
M11_H13	1	43228	9809.94374	4.41	<.0001
M11_H14	1	41564	9809.71976	4.24	<.0001
M11_H15	1	44956	9809.55774	4.58	<.0001
M11_H16	1	40824	9811.98594	4.16	<.0001
M11_H17	1	58111	10109	5.75	<.0001
S_1_H3	1	30807	6669.35106	4.62	<.0001
S_1_H4	1	37017	6671.77185	5.55	<.0001
S_1_H5	1	85875	4639.11989	18.51	<.0001
S_1_H6	1	214598	13618	15.76	<.0001
S_1_H7	1	227409	13510	16.83	<.0001
S_1_H8	1	130549	13448	9.71	<.0001
S_1_H9	1	49022	6793.79432	7.22	<.0001
S_1_H12	1	-14566	7375.72947	-1.97	0.0483
S_1_H13	1	-27570	7426.11901	-3.71	0.0002
S_1_H14	1	-65191	8832.69187	-7.38	<.0001
S_1_H15	1	-88870	8857.60664	-10.03	<.0001
S_1_H16	1	-37918	13729	-2.76	0.0058
S_1_H17	1	124688	13968	8.93	<.0001
S_1_H18	1	261572	13735	19.04	<.0001
S_1_H19	1	273756	8815.87257	31.05	<.0001
S_1_H20	1	187635	8463.09217	22.17	<.0001
S_1_H21	1	-34154	6791.12118	-5.03	<.0001
S_2_H2	1	-42631	6745.10176	-6.32	<.0001
S_2_H3	1	-40231	8293.86822	-4.85	<.0001
S_2_H4	1	-51044	8305.52931	-6.15	<.0001
S_2_H5	1	-155533	7699.42721	-20.20	<.0001
S_2_H6	1	-77099	14323	-5.38	<.0001
S_2_H7	1	-110474	14256	-7.75	<.0001
S_2_H8	1	-72875	14146	-5.15	<.0001

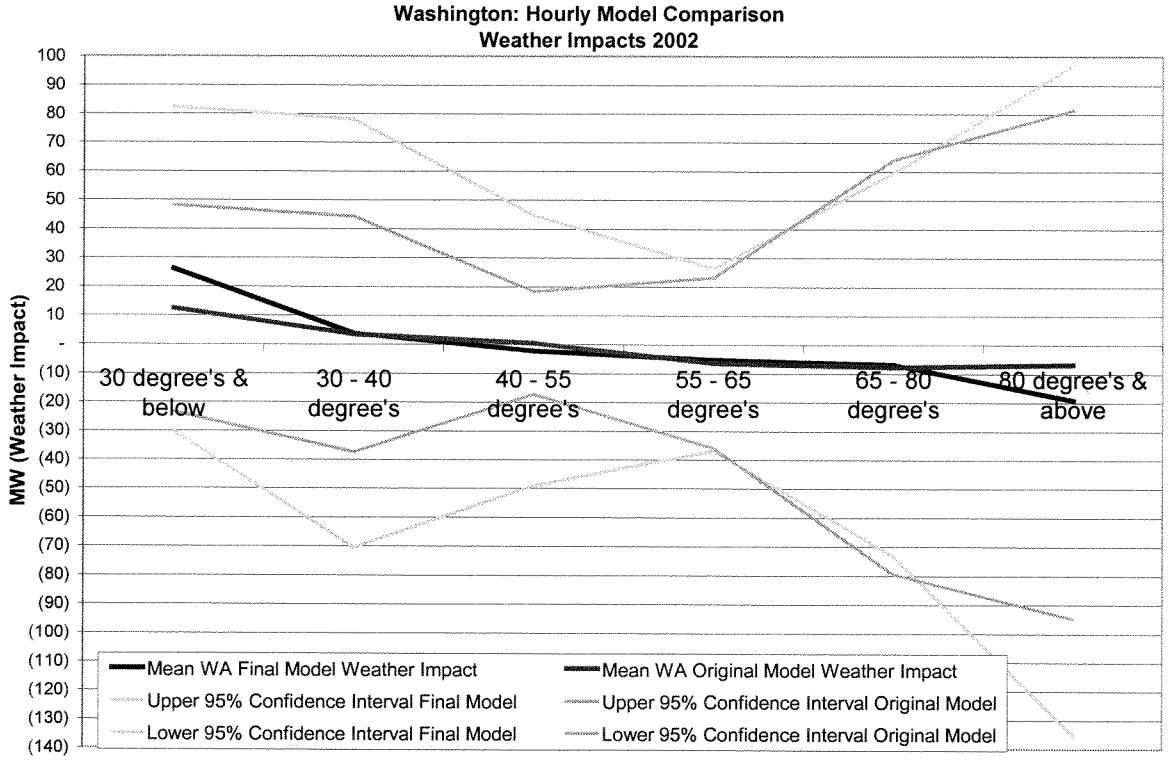
S_2_H9	1	-61282	8227.84770	-7.45	<.0001
S_2_H12	1	49987	8448.05414	5.92	<.0001
S_2_H13	1	74475	8491.28712	8.77	<.0001
S_2_H14	1	73586	9692.88146	7.59	<.0001
S_2_H15	1	71567	9720.99238	7.36	<.0001
S_2_H16	1	105387	14322	7.36	<.0001
S_2_H17	1	100178	14332	6.99	<.0001
S_2_H18	1	89238	14329	6.23	<.0001
S_2_H19	1	93312	9847.02518	9.48	<.0001
S_2_H20	1	55008	9804.33325	5.61	<.0001
S_2_H21	1	82855	8242.41562	10.05	<.0001
S_2_H22	1	118191	6758.48838	17.49	<.0001
S_2_H23	1	71941	6760.92389	10.64	<.0001
WE	1	-100015	4900.09511	-20.41	<.0001
WE_H4	1	-36105	5855.14363	-6.17	<.0001
WE_H5	1	-123150	5645.03350	-21.82	<.0001
WE_H6	1	-273968	5866.65356	-46.70	<.0001
WE_H7	1	-375784	5863.80159	-64.09	<.0001
WE_H8	1	-365581	5861.24533	-62.37	<.0001
WE_H9	1	-343943	5865.74398	-58.64	<.0001
WE_H10	1	-326386	5873.25514	-55.57	<.0001
WE_H11	1	-320491	5883.05052	-54.48	<.0001
WE_H12	1	-303687	5892.28436	-51.54	<.0001
WE_H13	1	-318372	5903.20486	-53.93	<.0001
WE_H14	1	-314922	5912.57425	-53.26	<.0001
WE_H15	1	-299830	5918.78578	-50.66	<.0001
WE_H16	1	-263756	5917.21745	-44.57	<.0001
WE_H17	1	-226292	5906.90217	-38.31	<.0001
WE_H18	1	-198002	5885.98433	-33.64	<.0001
WE_H19	1	-175632	5876.29607	-29.89	<.0001
WE_H20	1	-158255	5870.15817	-26.96	<.0001
WE_H21	1	-124313	5862.87149	-21.20	<.0001
WE_H22	1	-72838	5861.82033	-12.43	<.0001
WE_H23	1	-38990	5861.09809	-6.65	<.0001
WY3	1	32090	4276.25261	7.50	<.0001
WY4	1	23966	4398.72837	5.45	<.0001
WY6	1	-23129	6617.14188	-3.50	0.0005
WY7	1	-52211	7215.11904	-7.24	<.0001
WY8	1	-79312	7539.17910	-10.52	<.0001
WY9	1	-110238	7829.91628	-14.08	<.0001
WY10	1	-148539	9387.30785	-15.82	<.0001
WY11	1	-217690	10246	-21.25	<.0001
WY12	1	-290735	10779	-26.97	<.0001
WY13	1	-319396	11362	-28.11	<.0001
WY14	1	-303656	11915	-25.49	<.0001
WY15	1	-315946	13163	-24.00	<.0001
WY16	1	-353683	13757	-25.71	<.0001
WY17	1	-368214	14404	-25.56	<.0001
WY18	1	-370671	14598	-25.39	<.0001
WY19	1	-353726	15218	-23.24	<.0001
WY20	1	-390853	15799	-24.74	<.0001
WY21	1	-410515	16304	-25.18	<.0001
WY22	1	-385530	16589	-23.24	<.0001
WY23	1	-365791	16526	-22.13	<.0001
WY24	1	-355854	16595	-21.44	<.0001
WY25	1	-278686	16194	-17.21	<.0001
WY26	1	-291220	16255	-17.92	<.0001
WY27	1	-247150	15068	-16.40	<.0001
WY28	1	-229069	14782	-15.50	<.0001

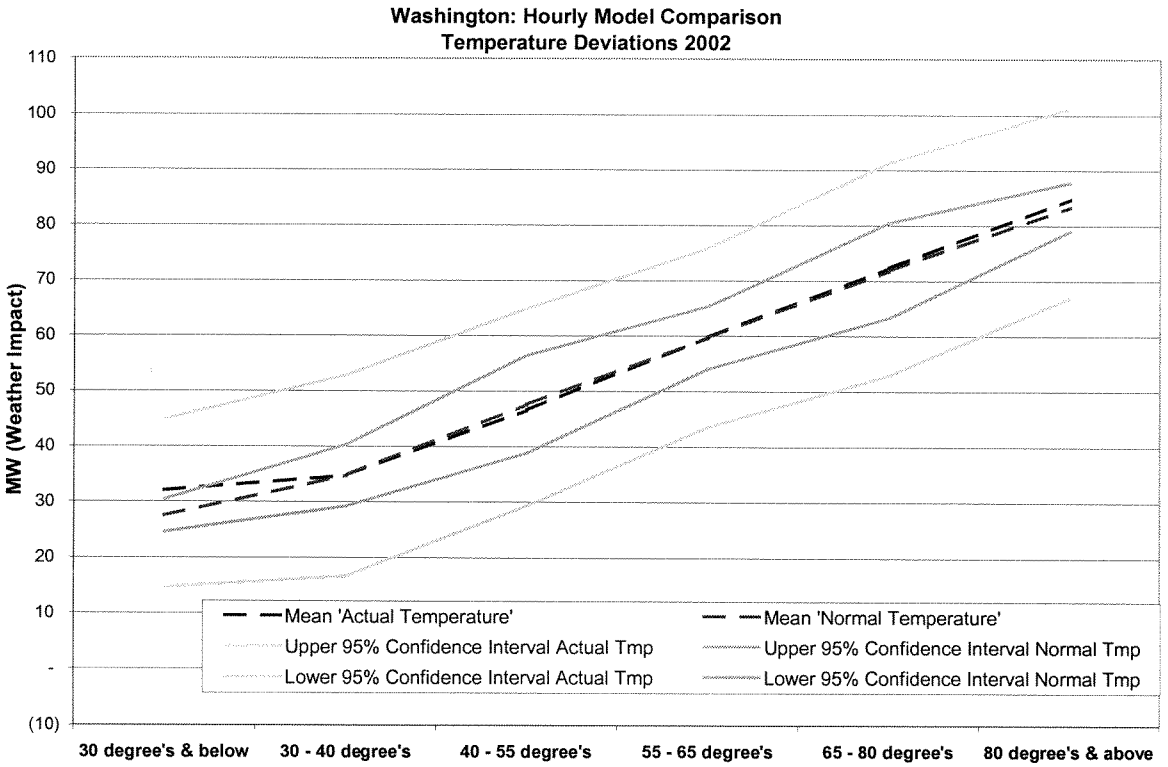
WY29	1	-208931	14459	-14.45	<.0001
WY30	1	-180319	14019	-12.86	<.0001
WY31	1	-125796	12915	-9.74	<.0001
WY32	1	-51813	12126	-4.27	<.0001
WY33	1	-41019	11591	-3.54	0.0004
WY34	1	-60634	10953	-5.54	<.0001
WY35	1	-50013	10269	-4.87	<.0001
WY36	1	-59117	7614.50656	-7.76	<.0001
WY37	1	-68568	6940.73943	-9.88	<.0001
WY38	1	-92598	6554.28846	-14.13	<.0001
WY39	1	-49481	6325.10876	-7.82	<.0001
WY41	1	-13851	4769.68283	-2.90	0.0037
WY42	1	-24655	4565.25497	-5.40	<.0001
WY44	1	49525	4697.47702	10.54	<.0001
WY45	1	48191	6115.17293	7.88	<.0001
WY46	1	66389	6673.14074	9.95	<.0001
WY47	1	85554	6804.51515	12.57	<.0001
WY48	1	149103	6870.11897	21.70	<.0001
WY49	1	148857	5402.59110	27.55	<.0001
WY50	1	181849	5566.18623	32.67	<.0001
WY51	1	181007	5579.71196	32.44	<.0001
WY52	1	136332	5584.56934	24.41	<.0001
H19_WY15	1	-101379	25663	-3.95	<.0001
H19_WY16	1	-112072	25655	-4.37	<.0001
H19_WY17	1	-126624	25677	-4.93	<.0001
H19_WY18	1	-69726	21151	-3.30	0.0010
H20_WY17	1	-37365	20465	-1.83	0.0679

WASHINGTON APPENDIX

Washington Appendix

Weather Impacts for each of the hourly models





Model Statistics by Month, Hour & Day of Week

Washington Model Statistics

Month of Year	*Final Model*	*Original Model*	*Final Model*	*Original Model*	*Final Model*	*Original Model*
2002 Stats	Mean Calibrated Estimate % Error	Mean Calibrated % Error	Mean Calibrated ABS % Error	Mean ABS Calibrated % Error	Sum Tmp Impact	Sum Weather Impact
Jan	-0.8%	-2.3%	2.8%	3.7%	21,145,914	9,707,172
Feb	2.6%	0.5%	4.2%	3.2%	6,014,948	1,448,597
Mar	2.2%	4.9%	3.6%	6.9%	(12,250,846)	74,230
Apr	-1.4%	-1.7%	3.5%	4.8%	(2,612,496)	(312,126)
May	-2.3%	-2.7%	4.9%	5.4%	2,197,636	286,730
Jun	-1.7%	-1.7%	4.3%	4.5%	(5,489,177)	(6,172,041)
Jul	0.0%	0.0%	4.1%	4.7%	(14,440,196)	(11,311,334)
Aug	-0.7%	-1.4%	2.9%	3.5%	(2,243,087)	(3,356,382)
Sep	0.2%	0.3%	2.9%	3.1%	(421,553)	(3,020,771)
Oct	1.1%	2.9%	3.2%	4.8%	(9,091,820)	(15,136)
Nov	0.1%	-1.5%	2.9%	4.0%	2,047,018	(1,594,643)
Dec	0.3%	-1.2%	3.3%	4.2%	19,070,618	11,189,224
Grand Total	0.0%	-0.3%	3.5%	4.4%	3,926,958	(3,076,481)

Hours of Day	*Final Model*	*Original Model*	*Final Model*	*Original Model*	*Final Model*	*Original Model*
2002 Stats	Mean Calibrated Estimate % Error	Mean Calibrated % Error	Mean Calibrated ABS % Error	Mean ABS Calibrated % Error	Sum Tmp Impact	Sum Weather Impact
HR1	-2.0%	0.2%	4.2%	4.8%	411,765	(89,156)
HR2	0.4%	0.2%	4.3%	4.8%	588,825	122,394
HR3	0.2%	0.1%	3.9%	5.1%	509,063	211,087
HR4	0.1%	0.0%	3.8%	5.2%	556,997	306,576
HR5	-0.1%	-0.1%	4.0%	5.3%	(249,744)	510,521
HR6	-0.1%	-0.3%	4.1%	5.6%	32,630	304,765
HR7	-0.3%	-0.7%	4.5%	5.9%	324,002	(563,538)
HR8	-0.4%	-0.8%	4.0%	5.1%	78,422	(1,874,058)
HR9	-0.3%	-0.6%	3.4%	4.3%	(23,680)	(2,228,087)
HR10	-0.2%	-0.6%	3.3%	4.0%	(347,604)	(2,471,513)
HR11	-0.2%	-0.5%	2.9%	3.7%	(511,898)	(2,157,256)
HR12	-0.1%	-0.4%	2.8%	3.6%	(600,438)	(1,785,180)
HR13	0.0%	-0.2%	2.8%	3.5%	(653,001)	(1,257,773)
HR14	0.0%	-0.2%	2.8%	3.4%	(333,838)	(403,453)
HR15	0.0%	-0.2%	2.8%	3.6%	(424,044)	(74,388)
HR16	-0.2%	-0.5%	2.9%	3.8%	(547,712)	199,348
HR17	-0.1%	-0.6%	3.1%	3.9%	113,689	1,021,021
HR18	-0.2%	-0.7%	3.3%	4.2%	43,490	1,317,573
HR19	-0.3%	-0.6%	3.0%	4.0%	717,997	2,146,803
HR20	-0.2%	-0.6%	3.3%	4.5%	1,192,668	2,164,420
HR21	-0.2%	-0.5%	3.8%	4.6%	1,460,366	1,266,760
HR22	-0.1%	-0.3%	3.5%	4.2%	717,896	378,317
HR23	0.2%	0.0%	3.3%	4.3%	338,169	(90,040)
HR24	3.1%	0.2%	4.9%	4.8%	532,938	(31,624)
Grand Total	0.0%	-0.3%	3.5%	4.4%	3,926,958	(3,076,481)

Day of Week	*Final Model*	*Original Model*	*Final Model*	*Original Model*	*Final Model*	*Original Model*
2002 Stats	Mean Calibrated Estimate % Error	Mean Calibrated % Error	Mean Calibrated ABS % Error	Mean ABS Calibrated % Error	Sum Tmp Impact	Sum Weather Impact
Sun	-0.2%	-0.5%	3.6%	4.6%	2,722,637	347,712
Mon	-0.4%	-0.7%	3.7%	4.3%	3,216,125	687,402
Tue	0.2%	-0.1%	3.6%	4.0%	2,732,168	770,566
Wed	0.0%	-0.1%	3.4%	4.5%	(6,583,257)	(4,106,646)
Thu	0.0%	-0.4%	3.5%	4.6%	(763,669)	(1,101,222)
Fri	0.2%	-0.1%	3.3%	4.4%	1,826,153	856,743
Sat	-0.2%	-0.4%	3.6%	4.7%	776,801	(531,035)
Grand Total	0.0%	-0.3%	3.5%	4.4%	3,926,958	(3,076,481)

Washington *Original* Hourly Splines & Variables

The REG Procedure
Model: MODEL1
Dependent Variable: WA

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	178	1.782451E14	1.001377E12	1314.18	<.0001
Error	26125	1.990664E13	761976516		
Corrected Total	26303	1.981518E14			

Root MSE	27604	R-Square	0.8995
Dependent Mean	508445	Adj R-Sq	0.8989
Coeff Var	5.42909		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	151863	16381	9.27	<.0001
YKM_SUN	1	260.72760	21.14160	12.33	<.0001
WA_MA	1	0.38817	0.02014	19.28	<.0001
YKM_HDD	1	2716.02219	38.92501	69.78	<.0001
YKM_CDDS	1	-778.17607	157.79087	-4.93	<.0001
YKM_CDD	1	5463.18394	58.73226	93.02	<.0001
YKM_S2_HCDD	1	-431.61278	66.51521	-6.49	<.0001
S_1	1	-30975	2708.33126	-11.44	<.0001
S_2	1	27650	3075.75075	8.99	<.0001
H1	1	-32595	2724.26382	-11.96	<.0001
H2	1	-45720	2724.47237	-16.78	<.0001
H3	1	-51098	2724.91753	-18.75	<.0001
H4	1	-52017	2724.54103	-19.09	<.0001
H5	1	-39947	2724.96526	-14.66	<.0001
H6	1	-5879.58438	2724.42067	-2.16	0.0309
H7	1	57947	2724.25403	21.27	<.0001
H8	1	94659	2726.33341	34.72	<.0001
H9	1	89035	2729.33524	32.62	<.0001
H10	1	81875	2731.97426	29.97	<.0001
H11	1	77156	2740.85137	28.15	<.0001
H12	1	70275	2751.09084	25.54	<.0001
H13	1	66073	2761.90437	23.92	<.0001
H14	1	67426	2769.81227	24.34	<.0001
H15	1	66194	2774.20388	23.86	<.0001
H16	1	68162	2771.75683	24.59	<.0001
H17	1	75427	2775.20582	27.18	<.0001
H18	1	85542	2754.96732	31.05	<.0001
H19	1	91796	2741.98712	33.48	<.0001
H20	1	97546	2738.83472	35.62	<.0001
H21	1	100837	2726.16834	36.99	<.0001
H22	1	87817	2725.62534	32.22	<.0001
H23	1	44524	2724.74262	16.34	<.0001
S_1_H1	1	4725.70354	3027.53564	1.56	0.1186

S_1_H2	1	9231.97902	3027.76722	3.05	0.0023
S_1_H3	1	14037	3028.33328	4.64	<.0001
S_1_H4	1	20164	3027.64731	6.66	<.0001
S_1_H5	1	27410	3028.23081	9.05	<.0001
S_1_H6	1	43758	3027.89576	14.45	<.0001
S_1_H7	1	61522	3028.02230	20.32	<.0001
S_1_H8	1	63518	3029.82712	20.96	<.0001
S_1_H9	1	54988	3031.81667	18.14	<.0001
S_1_H10	1	48340	3034.40039	15.93	<.0001
S_1_H11	1	44422	3043.41103	14.60	<.0001
S_1_H12	1	39501	3054.68216	12.93	<.0001
S_1_H13	1	33884	3065.28695	11.05	<.0001
S_1_H14	1	27303	3073.61897	8.88	<.0001
S_1_H15	1	22319	3077.57136	7.25	<.0001
S_1_H16	1	18931	3073.97945	6.16	<.0001
S_1_H17	1	29539	3097.51260	9.54	<.0001
S_1_H18	1	39070	3077.82805	12.69	<.0001
S_1_H19	1	40650	3066.42491	13.26	<.0001
S_1_H20	1	27142	3055.01557	8.88	<.0001
S_1_H21	1	8714.35977	3029.27007	2.88	0.0040
S_1_H22	1	-5631.44707	3028.96601	-1.86	0.0630
S_1_H23	1	-6715.10205	3028.01867	-2.22	0.0266
S_2_H1	1	-5518.05188	3645.46852	-1.51	0.1301
S_2_H2	1	-9535.28252	3646.08918	-2.62	0.0089
S_2_H3	1	-13722	3646.79206	-3.76	0.0002
S_2_H4	1	-16601	3647.09584	-4.55	<.0001
S_2_H5	1	-19860	3647.96540	-5.44	<.0001
S_2_H6	1	-35524	3647.72849	-9.74	<.0001
S_2_H7	1	-63739	3645.40312	-17.48	<.0001
S_2_H8	1	-69706	3653.68118	-19.08	<.0001
S_2_H9	1	-58264	3684.12998	-15.81	<.0001
S_2_H10	1	-46622	3729.82829	-12.50	<.0001
S_2_H11	1	-35299	3791.98841	-9.31	<.0001
S_2_H12	1	-23305	3837.27924	-6.07	<.0001
S_2_H13	1	-14545	3872.16333	-3.76	0.0002
S_2_H14	1	-6746.36120	3893.62040	-1.73	0.0832
S_2_H15	1	362.34473	3906.22758	0.09	0.9261
S_2_H16	1	4007.36085	3896.75085	1.03	0.3038
S_2_H17	1	6415.36011	3877.36043	1.65	0.0980
S_2_H18	1	2161.68099	3825.67501	0.57	0.5720
S_2_H19	1	4546.72637	3732.29222	1.22	0.2232
S_2_H20	1	47.66238	3678.94778	0.01	0.9897
S_2_H21	1	-5550.19729	3652.66983	-1.52	0.1287
S_2_H22	1	749.06031	3647.35459	0.21	0.8373
S_2_H23	1	2408.70432	3646.00868	0.66	0.5088
D1	1	-12221	637.95023	-19.16	<.0001
D2	1	-16079	1327.85824	-12.11	<.0001
D3	1	-10680	1370.14950	-7.80	<.0001
D4	1	-6966.95877	1384.16676	-5.03	<.0001
D5	1	-7445.82067	1362.37838	-5.47	<.0001
D6	1	-15197	1369.66040	-11.10	<.0001
WE	1	-32257	2161.11879	-14.93	<.0001
WE_H1	1	19172	2551.38935	7.51	<.0001
WE_H2	1	18097	2551.41815	7.09	<.0001
WE_H3	1	16257	2552.73157	6.37	<.0001
WE_H4	1	14026	2550.11018	5.50	<.0001
WE_H5	1	4152.39843	2551.40098	1.63	0.1036
WE_H6	1	-24089	2551.39676	-9.44	<.0001
WE_H7	1	-71669	2551.55660	-28.09	<.0001

WE_H8	1	-81111	2551.43061	-31.79	<.0001
WE_H9	1	-45681	2551.41083	-17.90	<.0001
WE_H10	1	-24899	2551.43987	-9.76	<.0001
WE_H11	1	-21047	2551.46440	-8.25	<.0001
WE_H12	1	-22301	2551.45878	-8.74	<.0001
WE_H13	1	-26013	2551.45701	-10.20	<.0001
WE_H14	1	-34365	2551.47447	-13.47	<.0001
WE_H15	1	-38169	2551.52254	-14.96	<.0001
WE_H16	1	-38660	2551.50353	-15.15	<.0001
WE_H17	1	-36470	2551.80574	-14.29	<.0001
WE_H18	1	-32148	2551.81668	-12.60	<.0001
WE_H19	1	-31309	2551.84707	-12.27	<.0001
WE_H20	1	-28228	2551.63259	-11.06	<.0001
WE_H21	1	-24837	2551.41179	-9.73	<.0001
WE_H22	1	-19221	2551.42539	-7.53	<.0001
WE_H23	1	-8739.12279	2551.38842	-3.43	0.0006
WY1	1	-1497.96400	2269.44106	-0.66	0.5092
WY2	1	301.68256	2011.51613	0.15	0.8808
WY3	1	828.08275	2048.96930	0.40	0.6861
WY4	1	-3573.04602	2141.67515	-1.67	0.0953
WY5	1	-14028	2299.04819	-6.10	<.0001
WY6	1	-19394	2522.96692	-7.69	<.0001
WY7	1	-30731	2813.89777	-10.92	<.0001
WY8	1	-47659	3159.05831	-15.09	<.0001
WY9	1	-47697	3549.42740	-13.44	<.0001
WY10	1	-37456	4029.56868	-9.30	<.0001
WY11	1	-53623	4460.27989	-12.02	<.0001
WY12	1	-57096	4899.35793	-11.65	<.0001
WY13	1	-88595	5346.38443	-16.57	<.0001
WY14	1	-108504	5812.38041	-18.67	<.0001
WY15	1	-115478	6271.24547	-18.41	<.0001
WY16	1	-129363	6712.46266	-19.27	<.0001
WY17	1	-142418	7146.71456	-19.93	<.0001
WY18	1	-145118	7456.46961	-19.46	<.0001
WY19	1	-157888	7782.58795	-20.29	<.0001
WY20	1	-168975	8141.72015	-20.75	<.0001
WY21	1	-178199	8458.52158	-21.07	<.0001
WY22	1	-179743	8725.32961	-20.60	<.0001
WY23	1	-178726	8937.13546	-20.00	<.0001
WY24	1	-177491	9051.61661	-19.61	<.0001
WY25	1	-176907	9086.46154	-19.47	<.0001
WY26	1	-173851	9093.15360	-19.12	<.0001
WY27	1	-173158	9011.68657	-19.21	<.0001
WY28	1	-157985	8857.12667	-17.84	<.0001
WY29	1	-153077	8635.84230	-17.73	<.0001
WY30	1	-143522	8364.75381	-17.16	<.0001
WY31	1	-152140	8039.84961	-18.92	<.0001
WY32	1	-143202	7686.22640	-18.63	<.0001
WY33	1	-117411	7313.76459	-16.05	<.0001
WY34	1	-128116	6921.14295	-18.51	<.0001
WY35	1	-105919	6515.44369	-16.26	<.0001
WY36	1	-105961	6024.60443	-17.59	<.0001
WY37	1	-104925	5640.56076	-18.60	<.0001
WY38	1	-94525	5223.17237	-18.10	<.0001
WY39	1	-82077	4814.38616	-17.05	<.0001
WY40	1	-81253	4325.75713	-18.78	<.0001
WY41	1	-69275	3984.50896	-17.39	<.0001
WY42	1	-55807	3592.91342	-15.53	<.0001
WY43	1	-34843	3234.91299	-10.77	<.0001

WY44	1	-9442.74887	2874.32479	-3.29	0.0010
WY45	1	-29873	2535.81978	-11.78	<.0001
WY46	1	-39985	2319.77487	-17.24	<.0001
WY47	1	-21038	2152.64072	-9.77	<.0001
WY48	1	10441	2069.89311	5.04	<.0001
WY49	1	13377	2007.08250	6.66	<.0001
WY50	1	15252	1997.59873	7.64	<.0001
WY51	1	23624	1995.62119	11.84	<.0001
WY52	1	10914	1998.17971	5.46	<.0001
H17_WY14	1	-41886	6285.14373	-6.66	<.0001
H17_WY15	1	-36213	6291.94921	-5.76	<.0001
H17_WY16	1	-26777	6291.43369	-4.26	<.0001
H17_WY17	1	-16715	6291.33758	-2.66	0.0079
H18_WY14	1	-57758	6283.91648	-9.19	<.0001
H18_WY15	1	-54323	6291.24438	-8.63	<.0001
H18_WY16	1	-47866	6290.53584	-7.61	<.0001
H18_WY17	1	-39405	6291.22391	-6.26	<.0001
H19_WY14	1	-48558	6283.48706	-7.73	<.0001
H19_WY15	1	-59195	6291.51320	-9.41	<.0001
H19_WY16	1	-53485	6290.65710	-8.50	<.0001
H19_WY17	1	-48812	6291.10315	-7.76	<.0001
H17_WY18	1	-24477	6268.46419	-3.90	<.0001
H18_WY18	1	-42666	6266.23803	-6.81	<.0001
H19_WY18	1	-49201	6266.06113	-7.85	<.0001
H20_WY15	1	-40076	6286.79480	-6.37	<.0001
H20_WY16	1	-40527	6285.92782	-6.45	<.0001
H20_WY17	1	-40980	6286.36742	-6.52	<.0001
H20_WY18	1	-47662	6264.46624	-7.61	<.0001

Washington *Final* Hourly Splines & Variables

The REG Procedure
Model: MODEL1
Dependent Variable: WA

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	226	1.847073E14	8.172888E11	1585.22	<.0001
Error	26077	1.344448E13	515568591		
Corrected Total	26303	1.981518E14			

Root MSE	22706	R-Square	0.9322
Dependent Mean	508445	Adj R-Sq	0.9316
Coeff Var	4.46580		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	249883	12755	19.59	<.0001
WA_MA	1	0.27722	0.01676	16.54	<.0001
YKM_SUN	1	13.63212	12.81721	1.06	0.2875
Day_YKM_Min	1	552.14788	37.85978	14.58	<.0001
YKM_CDD85Pl	1	1252.10552	186.77983	6.70	<.0001
lag3YKM_CDD85Pl	1	4939.97822	170.14640	29.03	<.0001
YKM_CDD65Pl	1	4039.57752	58.52690	69.02	<.0001
LagDay_YKM_Max	1	-1762.99842	40.84378	-43.16	<.0001
YKM_HDD57Le	1	2429.58527	45.44817	53.46	<.0001
YKM_HDD37Le	1	876.18894	68.47906	12.79	<.0001
YKM_S2_HCDD	1	-159.62159	54.52387	-2.93	0.0034
S_1	1	14574	3707.64907	3.93	<.0001
S_2	1	36435	2266.91306	16.07	<.0001
M1	1	87282	3843.19337	22.71	<.0001
M2	1	91562	3594.04128	25.48	<.0001
M3	1	104726	3283.54477	31.89	<.0001
M5	1	29245	3262.50997	8.96	<.0001
M6	1	34931	3175.16787	11.00	<.0001
M7	1	10640	2950.45370	3.61	0.0003
M8	1	-9684.38126	2633.34645	-3.68	0.0002
M10	1	-29056	3055.20011	-9.51	<.0001
M11	1	65974	4048.93794	16.29	<.0001
M12	1	69715	3961.00612	17.60	<.0001
D2	1	1662.03125	1032.87924	1.61	0.1076
D3	1	5162.29553	1083.50694	4.76	<.0001
D4	1	7588.28728	1074.16633	7.06	<.0001
D5	1	5827.13401	1078.99048	5.40	<.0001
D7	1	15687	1094.76967	14.33	<.0001
D2_S1	1	-12144	1329.11381	-9.14	<.0001
D3_S1	1	-12589	1271.09862	-9.90	<.0001
D4_S1	1	-14513	1273.05484	-11.40	<.0001
D5_S1	1	-12003	1276.11453	-9.41	<.0001
D6_S1	1	-14139	1025.95886	-13.78	<.0001

D7_S1	1	-8735.85176	1303.47543	-6.70	<.0001
D2_S2	1	-3333.56837	1625.50155	-2.05	0.0403
D3_S2	1	4151.15590	1571.35447	2.64	0.0083
D4_S2	1	5104.23176	1572.97088	3.24	0.0012
D5_S2	1	9499.03911	1582.22646	6.00	<.0001
D6_S2	1	7037.73158	1404.12360	5.01	<.0001
D7_S2	1	4854.80734	1612.98574	3.01	0.0026
H2	1	-27754	857.35681	-32.37	<.0001
H3	1	-27309	931.93778	-29.30	<.0001
H4	1	-33505	1680.64202	-19.94	<.0001
H6	1	9121.33907	2207.03535	4.13	<.0001
H7	1	71070	2207.00825	32.20	<.0001
H8	1	106920	2207.17451	48.44	<.0001
H9	1	109404	1759.17929	62.19	<.0001
H10	1	109103	2175.22954	50.16	<.0001
H11	1	107361	2182.50684	49.19	<.0001
H12	1	107554	3695.32537	29.11	<.0001
H13	1	105295	3700.90546	28.45	<.0001
H14	1	106815	3706.05178	28.82	<.0001
H15	1	106126	3707.23176	28.63	<.0001
H16	1	104426	2281.48886	45.77	<.0001
H17	1	110602	2266.48495	48.80	<.0001
H18	1	119628	2232.17692	53.59	<.0001
H19	1	104896	1802.74040	58.19	<.0001
H20	1	103252	1731.55339	59.63	<.0001
H21	1	110657	1472.71937	75.14	<.0001
H22	1	105086	1353.49511	77.64	<.0001
H23	1	57207	993.06084	57.61	<.0001
M3_H5	1	7624.86240	2676.56604	2.85	0.0044
M3_H6	1	10182	2737.09544	3.72	0.0002
M3_H7	1	12324	2735.71971	4.50	<.0001
M3_H8	1	12973	2638.73711	4.92	<.0001
M3_H9	1	8349.12092	2673.98731	3.12	0.0018
M3_H16	1	-8728.23717	2827.80441	-3.09	0.0020
M3_H17	1	-25298	2732.26005	-9.26	<.0001
M3_H18	1	-39998	2824.16411	-14.16	<.0001
M3_H19	1	-12513	2782.16098	-4.50	<.0001
M4_H6	1	-8454.14151	2781.74490	-3.04	0.0024
M4_H7	1	-7876.23908	2761.23298	-2.85	0.0043
M4_H16	1	-9220.87540	2858.00326	-3.23	0.0013
M4_H17	1	-29491	2763.76684	-10.67	<.0001
M4_H18	1	-53509	2857.38594	-18.73	<.0001
M4_H19	1	-31962	7351.58539	-4.35	<.0001
M4_H20	1	-35821	2664.00119	-13.45	<.0001
M5_H5	1	-19627	2578.05975	-7.61	<.0001
M5_H6	1	7539.87673	3227.57992	2.34	0.0195
M5_H7	1	12395	3227.57019	3.84	0.0001
M5_H8	1	15429	3227.52628	4.78	<.0001
M5_H12	1	-7703.31156	4367.82869	-1.76	0.0778
M5_H13	1	-8868.47693	4368.00549	-2.03	0.0423
M5_H14	1	-12735	4368.32742	-2.92	0.0036
M5_H15	1	-15868	4368.22695	-3.63	0.0003
M5_H16	1	-16662	3234.75888	-5.15	<.0001
M5_H17	1	-21007	3232.29996	-6.50	<.0001
M5_H18	1	-29338	3228.00832	-9.09	<.0001
M5_H19	1	-10428	3023.00042	-3.45	0.0006
M5_H20	1	-10022	2922.32655	-3.43	0.0006
M9_H5	1	-25331	2626.77586	-9.64	<.0001
M9_H10	1	-10637	3231.55041	-3.29	0.0010

M9_H11	1	-11187	3233.89473	-3.46	0.0005
M9_H12	1	-15007	4372.04076	-3.43	0.0006
M9_H13	1	-15119	4373.24246	-3.46	0.0005
M9_H14	1	-9760.54845	4373.23517	-2.23	0.0256
M9_H15	1	-7416.25842	4374.10113	-1.70	0.0900
M9_H19	1	24769	2991.21514	8.28	<.0001
M9_H20	1	36403	2961.66714	12.29	<.0001
M9_H21	1	27640	2827.61518	9.78	<.0001
M10_H5	1	-8792.29197	2704.62563	-3.25	0.0012
M10_H6	1	-14332	2764.13727	-5.19	<.0001
M10_H7	1	-14915	2763.39428	-5.40	<.0001
M10_H9	1	3679.11815	2707.46824	1.36	0.1742
M10_H10	1	5635.22904	2673.91437	2.11	0.0351
M10_H11	1	7266.67058	2676.56548	2.71	0.0066
M10_H12	1	8747.09104	2712.99342	3.22	0.0013
M10_H13	1	12062	2713.07602	4.45	<.0001
M10_H14	1	14522	2713.16093	5.35	<.0001
M10_H15	1	16721	2713.35377	6.16	<.0001
M10_H16	1	12617	2868.91160	4.40	<.0001
M10_H18	1	-25952	2853.87234	-9.09	<.0001
M10_H19	1	-13791	2760.71350	-5.00	<.0001
M11_H12	1	3774.92302	2702.85737	1.40	0.1625
M11_H13	1	4094.17506	2703.09414	1.51	0.1299
M11_H14	1	5579.58929	2703.25915	2.06	0.0390
M11_H15	1	7010.54593	2703.06662	2.59	0.0095
M11_H16	1	5700.43505	2844.64466	2.00	0.0451
M11_H17	1	8368.67037	2756.04784	3.04	0.0024
M11_H18	1	7062.71072	2842.41561	2.48	0.0130
S_1_H4	1	11369	1910.31238	5.95	<.0001
S_1_H5	1	-3610.53756	1324.06671	-2.73	0.0064
S_1_H6	1	38941	2468.20229	15.78	<.0001
S_1_H7	1	60980	2468.42293	24.70	<.0001
S_1_H8	1	67107	2361.42777	28.42	<.0001
S_1_H9	1	56257	2008.42303	28.01	<.0001
S_1_H10	1	46973	2349.85898	19.99	<.0001
S_1_H11	1	41734	2363.62169	17.66	<.0001
S_1_H12	1	29868	3837.49358	7.78	<.0001
S_1_H13	1	21675	3845.42521	5.64	<.0001
S_1_H14	1	14181	3852.23085	3.68	0.0002
S_1_H15	1	7981.45605	3853.60449	2.07	0.0384
S_1_H16	1	11427	2647.90535	4.32	<.0001
S_1_H17	1	25154	2534.03464	9.93	<.0001
S_1_H18	1	40764	2593.41689	15.72	<.0001
S_1_H19	1	55599	2121.62445	26.21	<.0001
S_1_H20	1	43792	1929.90487	22.69	<.0001
S_1_H21	1	19232	1660.98812	11.58	<.0001
S_1_H22	1	-4973.45170	1549.89830	-3.21	0.0013
S_2_H1	1	-23900	1722.78703	-13.87	<.0001
S_2_H3	1	-24786	1863.48154	-13.30	<.0001
S_2_H4	1	-23247	2299.02765	-10.11	<.0001
S_2_H5	1	-57897	1821.09140	-31.79	<.0001
S_2_H6	1	-41909	2659.27305	-15.76	<.0001
S_2_H7	1	-64267	2654.37548	-24.21	<.0001
S_2_H8	1	-65511	2654.57903	-24.68	<.0001
S_2_H9	1	-58249	2318.46032	-25.12	<.0001
S_2_H10	1	-50182	2684.52286	-18.69	<.0001
S_2_H11	1	-39413	2737.87008	-14.40	<.0001
S_2_H12	1	-33280	4056.43933	-8.20	<.0001
S_2_H13	1	-26625	4078.70373	-6.53	<.0001

S_2_H14	1	-20942	4092.76721	-5.12	<.0001
S_2_H15	1	-17605	4099.69230	-4.29	<.0001
S_2_H16	1	-14054	2864.16558	-4.91	<.0001
S_2_H17	1	-14226	2840.39965	-5.01	<.0001
S_2_H18	1	-20333	2797.42174	-7.27	<.0001
WE	1	-20625	984.10779	-20.96	<.0001
WE_H5	1	-9917.24702	1613.66116	-6.15	<.0001
WE_H6	1	-37139	1626.40370	-22.84	<.0001
WE_H7	1	-85241	1626.43026	-52.41	<.0001
WE_H8	1	-95191	1625.47607	-58.56	<.0001
WE_H9	1	-60778	1626.18504	-37.37	<.0001
WE_H10	1	-40223	1626.38160	-24.73	<.0001
WE_H11	1	-36547	1626.50147	-22.47	<.0001
WE_H12	1	-37826	1627.31209	-23.24	<.0001
WE_H13	1	-41137	1627.56524	-25.28	<.0001
WE_H14	1	-49179	1627.73404	-30.21	<.0001
WE_H15	1	-52793	1628.03816	-32.43	<.0001
WE_H16	1	-52736	1627.67524	-32.40	<.0001
WE_H17	1	-50529	1627.26604	-31.05	<.0001
WE_H18	1	-46130	1627.84055	-28.34	<.0001
WE_H19	1	-45068	1628.14405	-27.68	<.0001
WE_H20	1	-41504	1626.48050	-25.52	<.0001
WE_H21	1	-39370	1625.69113	-24.22	<.0001
WE_H22	1	-32994	1625.18851	-20.30	<.0001
WE_H23	1	-22122	1625.13216	-13.61	<.0001
WY4	1	2159.88757	1164.88299	1.85	0.0637
WY6	1	-6879.75008	1881.40265	-3.66	0.0003
WY7	1	-8685.84535	2039.36304	-4.26	<.0001
WY8	1	-10146	2099.45687	-4.83	<.0001
WY9	1	-24118	2193.94447	-10.99	<.0001
WY10	1	-29892	2608.49546	-11.46	<.0001
WY11	1	-38810	2847.50948	-13.63	<.0001
WY12	1	-35931	2985.49225	-12.04	<.0001
WY13	1	-41886	3149.73119	-13.30	<.0001
WY14	1	-56922	3307.39386	-17.21	<.0001
WY15	1	-54381	3654.54706	-14.88	<.0001
WY16	1	-55028	3817.49124	-14.41	<.0001
WY17	1	-62873	3988.75809	-15.76	<.0001
WY18	1	-62823	4045.91195	-15.53	<.0001
WY19	1	-63483	4230.45152	-15.01	<.0001
WY20	1	-71059	4397.01461	-16.16	<.0001
WY21	1	-77925	4540.39583	-17.16	<.0001
WY22	1	-77293	4599.26357	-16.81	<.0001
WY23	1	-81471	4590.86113	-17.75	<.0001
WY24	1	-81948	4626.87548	-17.71	<.0001
WY25	1	-83922	4505.40380	-18.63	<.0001
WY26	1	-84070	4515.50639	-18.62	<.0001
WY27	1	-66364	4176.31669	-15.89	<.0001
WY28	1	-50660	4122.66713	-12.29	<.0001
WY29	1	-43031	4012.42898	-10.72	<.0001
WY30	1	-39429	3905.51408	-10.10	<.0001
WY31	1	-41400	3576.06086	-11.58	<.0001
WY32	1	-29627	3362.17262	-8.81	<.0001
WY33	1	-7942.20311	3240.86678	-2.45	0.0143
WY34	1	-17646	3043.66103	-5.80	<.0001
WY35	1	-2495.27172	2881.99109	-0.87	0.3866
WY36	1	-9267.27790	2109.75038	-4.39	<.0001
WY37	1	-13312	1954.68877	-6.81	<.0001
WY38	1	-9555.79151	1858.46036	-5.14	<.0001

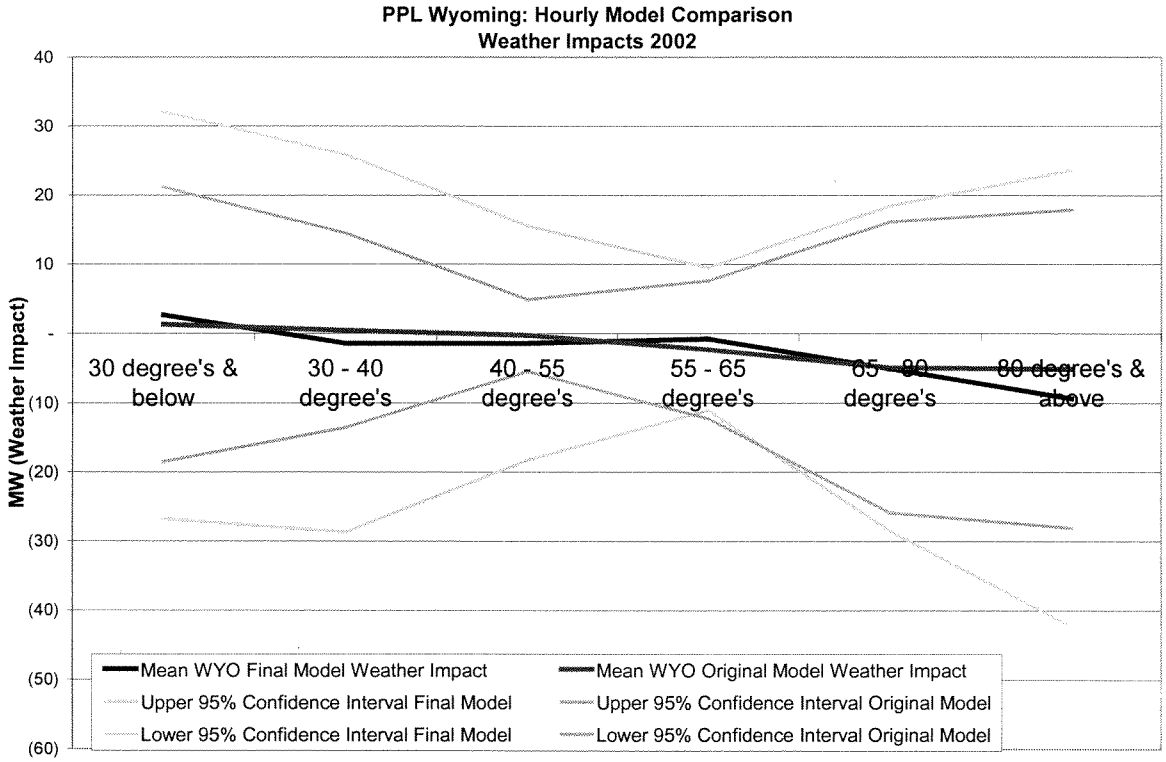
WY39	1	-2065.38266	1771.90725	-1.17	0.2438
WY41	1	-7513.78004	1346.75737	-5.58	<.0001
WY42	1	-2628.33921	1290.37009	-2.04	0.0417
WY44	1	21657	1347.69789	16.07	<.0001
WY45	1	21256	1733.91763	12.26	<.0001
WY46	1	10734	1901.99193	5.64	<.0001
WY47	1	17179	1929.46135	8.90	<.0001
WY48	1	27980	1938.04003	14.44	<.0001
WY49	1	27102	1510.49373	17.94	<.0001
WY50	1	27246	1567.37656	17.38	<.0001
WY51	1	32995	1579.04995	20.90	<.0001
WY52	1	18049	1577.94609	11.44	<.0001
H19_WY14	1	-17198	7127.05988	-2.41	0.0158
H19_WY15	1	-24603	8834.03321	-2.79	0.0054
H19_WY16	1	-21603	8833.84732	-2.45	0.0145
H19_WY17	1	-17028	8833.73223	-1.93	0.0539
H19_WY18	1	-20166	6735.18414	-2.99	0.0028

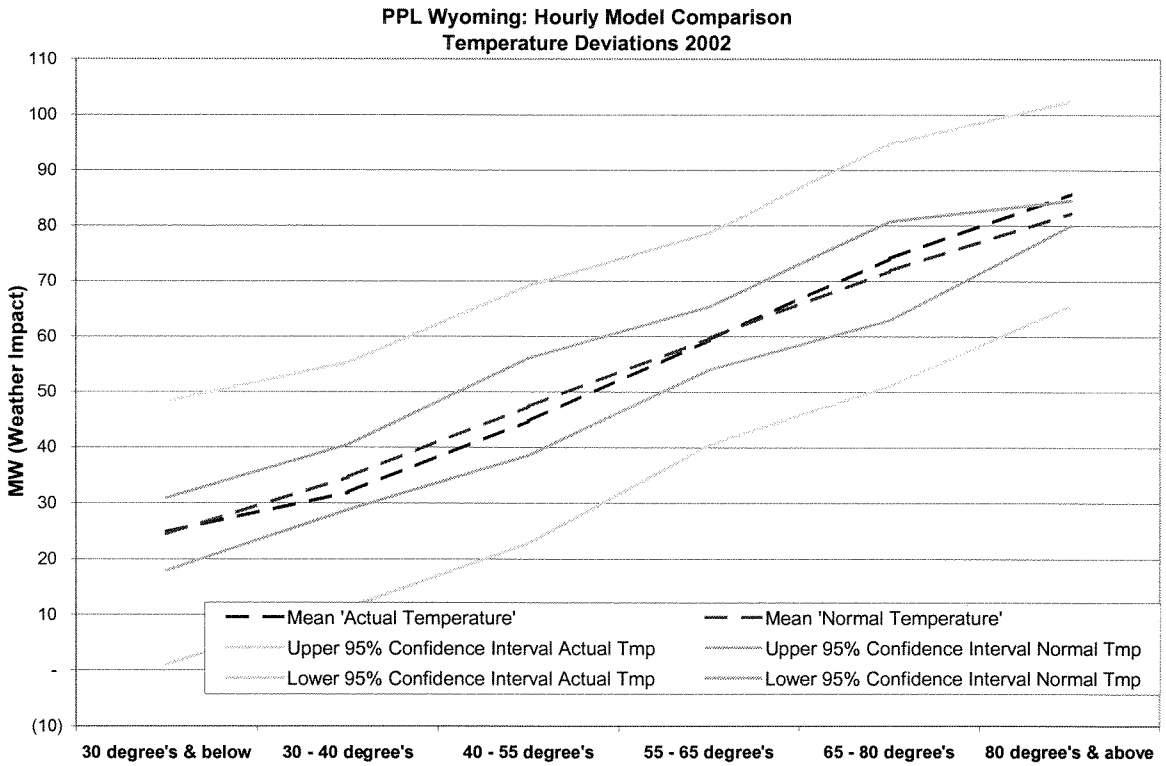
WYOMING APPENDIX

EAST

PPL Wyoming Appendix

Weather Impacts for each of the hourly models





Model Statistics by Month, Hour & Day of Week

PPL Wyoming **Model Statistics**

Month of Year	*Final Model*	*Original Model*	*Final Model*	*Original Model*	*Final Model*	*Original Model*
2002 Stats	Mean Calibrated Estimate % Error	Mean Calibrated % Error	Mean Calibrated ABS % Error	Mean ABS Calibrated % Error	Sum Tmp Impact	Sum Weather Impact
Jan	-7.0%	-8.2%	7.3%	8.5%	2,373,613	605,169
Feb	-6.6%	-8.0%	6.8%	8.1%	1,719,036	199,369
Mar	-6.1%	-5.7%	6.3%	6.9%	(6,735,541)	972
Apr	0.2%	0.0%	1.9%	2.1%	(902,461)	18,317
May	2.2%	1.7%	3.3%	3.1%	651,248	(1,349,143)
Jun	0.8%	0.7%	2.5%	2.4%	(3,254,663)	(3,569,504)
Jul	0.5%	0.2%	2.5%	2.4%	(4,819,444)	(3,626,137)
Aug	-0.2%	-0.7%	3.5%	3.5%	803,357	(215,911)
Sep	4.4%	4.3%	4.6%	4.4%	(876,791)	(1,685,526)
Oct	0.4%	0.9%	2.5%	2.6%	(3,989,887)	(13,958)
Nov	4.8%	4.4%	5.0%	4.7%	1,094,358	(22,312)
Dec	6.1%	5.8%	6.1%	5.8%	5,142,858	2,681,198
Grand Total	0.0%	-0.4%	4.3%	4.5%	(8,794,317)	(6,977,463)

Hours of Day	*Final Model*	*Original Model*	*Final Model*	*Original Model*	*Final Model*	*Original Model*
2002 Stats	Mean Calibrated Estimate % Error	Mean Calibrated % Error	Mean Calibrated ABS % Error	Mean ABS Calibrated % Error	Sum Tmp Impact	Sum Weather Impact
HR1	-1.5%	-1.3%	4.3%	4.4%	30,472	(11,027)
HR2	-1.0%	-1.3%	4.2%	4.3%	118,966	58,119
HR3	-1.0%	-1.3%	4.2%	4.4%	123,896	77,324
HR4	-0.8%	-1.1%	4.1%	4.3%	139,831	106,049
HR5	-0.4%	-0.8%	4.2%	4.4%	129,956	89,289
HR6	-0.6%	-0.9%	4.4%	4.6%	150,525	54,940
HR7	-0.3%	-0.6%	4.1%	4.2%	91,828	(119,328)
HR8	0.2%	-0.1%	4.1%	4.2%	(105,686)	(487,927)
HR9	0.4%	0.1%	4.2%	4.4%	(279,705)	(730,819)
HR10	0.7%	0.4%	4.4%	4.5%	(544,315)	(895,391)
HR11	0.7%	0.4%	4.5%	4.6%	(869,141)	(945,389)
HR12	0.6%	0.3%	4.6%	4.8%	(1,094,714)	(869,223)
HR13	0.5%	0.1%	4.7%	4.9%	(1,308,641)	(871,386)
HR14	0.5%	0.2%	4.7%	4.9%	(1,247,202)	(762,291)
HR15	0.5%	0.2%	4.7%	4.9%	(1,018,425)	(487,563)
HR16	0.6%	0.2%	4.8%	5.0%	(1,006,144)	(471,770)
HR17	0.7%	0.3%	4.9%	5.2%	(869,788)	(390,474)
HR18	0.3%	-0.1%	4.4%	4.6%	(642,804)	(179,910)
HR19	0.1%	-0.2%	4.3%	4.6%	(433,200)	(24,912)
HR20	0.3%	0.0%	4.0%	4.3%	(48,767)	163,488
HR21	0.2%	-0.1%	4.1%	4.2%	(18,191)	(2,857)
HR22	-0.3%	-0.6%	4.0%	4.1%	17,285	(23,729)
HR23	-0.6%	-0.9%	4.0%	4.2%	(110,832)	(180,588)
HR24	-0.4%	-1.2%	4.3%	4.5%	479	(72,087)
Grand Total	0.0%	-0.4%	4.3%	4.5%	(8,794,317)	(6,977,463)

Day of Week	*Final Model*	*Original Model*	*Final Model*	*Original Model*	*Final Model*	*Original Model*
2002 Stats	Mean Calibrated Estimate % Error	Mean Calibrated % Error	Mean Calibrated ABS % Error	Mean ABS Calibrated % Error	Sum Tmp Impact	Sum Weather Impact
Sun	-0.1%	-0.5%	4.6%	4.7%	(658,917)	(873,266)
Mon	0.1%	-0.3%	4.3%	4.3%	(1,092,599)	(1,715,730)
Tue	-0.2%	-0.4%	4.4%	4.5%	(1,877,827)	(1,958,565)
Wed	0.5%	0.2%	4.4%	4.6%	(2,370,785)	(1,930,823)
Thu	0.2%	-0.2%	4.1%	4.4%	(1,299,939)	(567,588)
Fri	-0.5%	-0.9%	4.3%	4.5%	(1,161,078)	100,269
Sat	-0.1%	-0.5%	4.4%	4.7%	(333,172)	(31,760)
Grand Total	0.0%	-0.4%	4.3%	4.5%	(8,794,317)	(6,977,463)

PPL Wyoming *Original* Hourly Splines & Variables

The REG Procedure
Model: MODEL1
Dependent Variable: WYO

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	178	6.278882E13	3.527462E11	194.67	<.0001
Error	26125	4.733971E13	1812046169		
Corrected Total	26303	1.101285E14			

Root MSE	42568	R-Square	0.5701
Dependent Mean	775662	Adj R-Sq	0.5672
Coeff Var	5.48798		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-324327	22516	-14.40	<.0001
CPR_SUN	1	796.10681	37.14716	21.43	<.0001
WYO_MA	1	0.83034	0.00737	112.64	<.0001
CPR_HDD	1	963.32328	40.86516	23.57	<.0001
CPR_CDDS	1	-74.76405	278.27430	-0.27	0.7882
CPR_CDD	1	1458.37555	96.39168	15.13	<.0001
CPR_S2_HCDD	1	-30.02477	73.26415	-0.41	0.6819
S_1	1	3536.05465	4181.50192	0.85	0.3978
S_2	1	10664	4771.62738	2.23	0.0254
H1	1	-8388.64694	4201.11096	-2.00	0.0459
H2	1	-10720	4201.29154	-2.55	0.0107
H3	1	-10166	4202.00186	-2.42	0.0156
H4	1	-8333.45427	4201.58801	-1.98	0.0473
H5	1	-916.44162	4201.38122	-0.22	0.8273
H6	1	19377	4201.18138	4.61	<.0001
H7	1	41732	4201.18661	9.93	<.0001
H8	1	50744	4203.65742	12.07	<.0001
H9	1	54230	4208.56175	12.89	<.0001
H10	1	54201	4219.63999	12.84	<.0001
H11	1	54326	4237.18194	12.82	<.0001
H12	1	50805	4256.41430	11.94	<.0001
H13	1	49405	4273.75019	11.56	<.0001
H14	1	51049	4279.58059	11.93	<.0001
H15	1	51441	4281.84165	12.01	<.0001
H16	1	49596	4271.44180	11.61	<.0001
H17	1	44090	4271.80679	10.32	<.0001
H18	1	42559	4242.39835	10.03	<.0001
H19	1	49678	4227.01655	11.75	<.0001
H20	1	61569	4221.68384	14.58	<.0001
H21	1	59606	4201.76006	14.19	<.0001
H22	1	37900	4201.31533	9.02	<.0001
H23	1	15851	4201.03380	3.77	0.0002
S_1_H1	1	2104.29614	4668.84976	0.45	0.6522

S_1_H2	1	4933.09468	4668.95818	1.06	0.2907
S_1_H3	1	5074.02719	4669.80103	1.09	0.2772
S_1_H4	1	5885.49189	4668.87133	1.26	0.2075
S_1_H5	1	9142.28797	4669.14910	1.96	0.0502
S_1_H6	1	14241	4668.92451	3.05	0.0023
S_1_H7	1	14583	4668.91542	3.12	0.0018
S_1_H8	1	10610	4671.00009	2.27	0.0231
S_1_H9	1	7815.45785	4675.26338	1.67	0.0946
S_1_H10	1	6589.98470	4686.70336	1.41	0.1597
S_1_H11	1	5020.39759	4704.86252	1.07	0.2860
S_1_H12	1	2631.26489	4724.20594	0.56	0.5775
S_1_H13	1	1492.75586	4740.99045	0.31	0.7529
S_1_H14	1	-1099.94656	4747.39039	-0.23	0.8168
S_1_H15	1	-3272.26219	4748.67795	-0.69	0.4908
S_1_H16	1	1933.64677	4737.92091	0.41	0.6832
S_1_H17	1	16662	4769.09760	3.49	0.0005
S_1_H18	1	22667	4741.43414	4.78	<.0001
S_1_H19	1	16354	4726.72646	3.46	0.0005
S_1_H20	1	2452.92717	4708.97855	0.52	0.6024
S_1_H21	1	-7948.80539	4669.26557	-1.70	0.0887
S_1_H22	1	-6328.94242	4668.98669	-1.36	0.1753
S_1_H23	1	-4519.73767	4668.75928	-0.97	0.3330
S_2_H1	1	-4226.35189	5621.86612	-0.75	0.4522
S_2_H2	1	-6280.31840	5623.05724	-1.12	0.2641
S_2_H3	1	-9507.60014	5623.78809	-1.69	0.0909
S_2_H4	1	-10764	5624.47416	-1.91	0.0557
S_2_H5	1	-11819	5625.16365	-2.10	0.0356
S_2_H6	1	-19694	5623.47344	-3.50	0.0005
S_2_H7	1	-24927	5621.88876	-4.43	<.0001
S_2_H8	1	-18843	5635.63078	-3.34	0.0008
S_2_H9	1	-12301	5654.99651	-2.18	0.0296
S_2_H10	1	-6674.87148	5686.66353	-1.17	0.2405
S_2_H11	1	-1359.18939	5728.72973	-0.24	0.8125
S_2_H12	1	2159.86186	5770.80312	0.37	0.7082
S_2_H13	1	5703.45905	5804.11100	0.98	0.3258
S_2_H14	1	7645.63015	5819.11244	1.31	0.1889
S_2_H15	1	7666.65054	5826.63852	1.32	0.1883
S_2_H16	1	9519.24327	5819.35072	1.64	0.1019
S_2_H17	1	5659.10741	5805.87698	0.97	0.3297
S_2_H18	1	14.83618	5774.12801	0.00	0.9979
S_2_H19	1	-4099.22729	5729.84405	-0.72	0.4744
S_2_H20	1	-6695.66625	5680.38002	-1.18	0.2385
S_2_H21	1	-233.46475	5638.87693	-0.04	0.9670
S_2_H22	1	2167.15788	5626.93215	0.39	0.7001
S_2_H23	1	1131.96265	5622.45206	0.20	0.8404
D1	1	-3011.91704	983.32141	-3.06	0.0022
D2	1	-789.18829	2047.91790	-0.39	0.7000
D3	1	195.36607	2113.14479	0.09	0.9263
D4	1	-987.68085	2134.60792	-0.46	0.6436
D5	1	4416.01833	2101.58895	2.10	0.0356
D6	1	-214.39585	2112.98823	-0.10	0.9192
WE	1	-9150.70909	3332.97624	-2.75	0.0060
WE_H1	1	2570.56755	3934.69549	0.65	0.5136
WE_H2	1	1473.27440	3934.53819	0.37	0.7081
WE_H3	1	1902.18625	3936.64021	0.48	0.6290
WE_H4	1	-688.22675	3932.54887	-0.18	0.8611
WE_H5	1	-7849.63688	3934.60916	-2.00	0.0461
WE_H6	1	-25644	3934.51604	-6.52	<.0001
WE_H7	1	-38109	3934.50627	-9.69	<.0001

WE_H8	1	-31606	3934.53594	-8.03	<.0001
WE_H9	1	-24182	3934.61805	-6.15	<.0001
WE_H10	1	-21117	3934.65727	-5.37	<.0001
WE_H11	1	-20987	3934.73081	-5.33	<.0001
WE_H12	1	-19259	3934.77143	-4.89	<.0001
WE_H13	1	-22697	3934.78229	-5.77	<.0001
WE_H14	1	-25038	3934.88815	-6.36	<.0001
WE_H15	1	-22141	3934.65812	-5.63	<.0001
WE_H16	1	-18649	3934.86161	-4.74	<.0001
WE_H17	1	-11455	3934.97174	-2.91	0.0036
WE_H18	1	-10907	3934.95955	-2.77	0.0056
WE_H19	1	-8742.92286	3934.89745	-2.22	0.0263
WE_H20	1	-8866.58013	3934.81331	-2.25	0.0242
WE_H21	1	-6669.49893	3934.54659	-1.70	0.0901
WE_H22	1	-3730.51015	3934.56959	-0.95	0.3431
WE_H23	1	-319.70970	3934.72648	-0.08	0.9352
WY1	1	-6867.89891	3502.70255	-1.96	0.0499
WY2	1	-31833	3103.77441	-10.26	<.0001
WY3	1	-28593	3153.53894	-9.07	<.0001
WY4	1	-64744	3303.28738	-19.60	<.0001
WY5	1	-58775	3529.63237	-16.65	<.0001
WY6	1	-62994	3871.56709	-16.27	<.0001
WY7	1	-79209	4317.84373	-18.34	<.0001
WY8	1	-111016	4848.48360	-22.90	<.0001
WY9	1	-112359	5455.56973	-20.60	<.0001
WY10	1	-111006	6250.38427	-17.76	<.0001
WY11	1	-127902	6917.03448	-18.49	<.0001
WY12	1	-146575	7597.03226	-19.29	<.0001
WY13	1	-182126	8287.22184	-21.98	<.0001
WY14	1	-182298	9011.34490	-20.23	<.0001
WY15	1	-217037	9717.92179	-22.33	<.0001
WY16	1	-225672	10401	-21.70	<.0001
WY17	1	-251841	11075	-22.74	<.0001
WY18	1	-246210	11540	-21.33	<.0001
WY19	1	-261557	12030	-21.74	<.0001
WY20	1	-312747	12589	-24.84	<.0001
WY21	1	-297944	13078	-22.78	<.0001
WY22	1	-305910	13475	-22.70	<.0001
WY23	1	-313111	13782	-22.72	<.0001
WY24	1	-308330	13951	-22.10	<.0001
WY25	1	-306478	14006	-21.88	<.0001
WY26	1	-312792	14022	-22.31	<.0001
WY27	1	-304352	13896	-21.90	<.0001
WY28	1	-301474	13658	-22.07	<.0001
WY29	1	-297067	13318	-22.31	<.0001
WY30	1	-290379	12918	-22.48	<.0001
WY31	1	-258327	12426	-20.79	<.0001
WY32	1	-251160	11902	-21.10	<.0001
WY33	1	-250936	11313	-22.18	<.0001
WY34	1	-229007	10719	-21.37	<.0001
WY35	1	-194350	10093	-19.26	<.0001
WY36	1	-174001	9359.43631	-18.59	<.0001
WY37	1	-179139	8755.40931	-20.46	<.0001
WY38	1	-159798	8103.84132	-19.72	<.0001
WY39	1	-138423	7481.89523	-18.50	<.0001
WY40	1	-124258	6742.48669	-18.43	<.0001
WY41	1	-111822	6216.20776	-17.99	<.0001
WY42	1	-81451	5609.72746	-14.52	<.0001
WY43	1	-70935	5050.83064	-14.04	<.0001

WY44	1	-41944	4490.37983	-9.34	<.0001
WY45	1	-41844	3976.65930	-10.52	<.0001
WY46	1	-49182	3583.43356	-13.72	<.0001
WY47	1	-32336	3325.21198	-9.72	<.0001
WY48	1	-2602.64354	3195.18434	-0.81	0.4153
WY49	1	258.61779	3115.35990	0.08	0.9338
WY50	1	11487	3090.03884	3.72	0.0002
WY51	1	9943.34503	3079.45226	3.23	0.0012
WY52	1	-7939.44727	3084.59619	-2.57	0.0101
H17_WY14	1	-20434	9691.77589	-2.11	0.0350
H17_WY15	1	-22039	9701.63161	-2.27	0.0231
H17_WY16	1	-22438	9700.55205	-2.31	0.0207
H17_WY17	1	-18074	9701.48021	-1.86	0.0625
H18_WY14	1	-19909	9689.79477	-2.05	0.0399
H18_WY15	1	-23314	9701.30461	-2.40	0.0163
H18_WY16	1	-31744	9700.19299	-3.27	0.0011
H18_WY17	1	-28200	9700.23100	-2.91	0.0037
H19_WY14	1	-8422.27185	9689.79038	-0.87	0.3848
H19_WY15	1	-19696	9701.95755	-2.03	0.0424
H19_WY16	1	-31324	9700.25107	-3.23	0.0012
H19_WY17	1	-25956	9700.24376	-2.68	0.0075
H17_WY18	1	-14787	9665.76301	-1.53	0.1261
H18_WY18	1	-19476	9664.00198	-2.02	0.0439
H19_WY18	1	-15306	9662.75206	-1.58	0.1132
H20_WY15	1	3523.08709	9695.11708	0.36	0.7163
H20_WY16	1	-6717.77501	9693.71879	-0.69	0.4883
H20_WY17	1	1108.55525	9693.63656	0.11	0.9090
H20_WY18	1	-3495.14778	9661.29323	-0.36	0.7175

PPL Wyoming *Final* Hourly Splines & Variables

The REG Procedure
Model: MODEL1
Dependent Variable: WYO

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	196	6.400624E13	3.265625E11	184.85	<.0001
Error	26107	4.612229E13	1766663559		
Corrected Total	26303	1.101285E14			

Root MSE	42032	R-Square	0.5812
Dependent Mean	775662	Adj R-Sq	0.5781
Coeff Var	5.41882		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-80933	18924	-4.28	<.0001
WYO_MA	1	0.81085	0.00728	111.34	<.0001
CPR_SUN	1	268.00642	24.87255	10.78	<.0001
Day_CPR_Min	1	347.44411	68.76407	5.05	<.0001
CPR_CDD80Pl	1	1194.49396	246.18806	4.85	<.0001
CPR_CDD65Pl	1	931.93730	124.41716	7.49	<.0001
lag3CPR_CDD65Pl	1	218.98461	106.48244	2.06	0.0397
LagDay_CPR_Max	1	-683.58758	50.67714	-13.49	<.0001
CPR_HDD57Le	1	669.09781	45.61418	14.67	<.0001
S_1	1	55687	5791.86858	9.61	<.0001
M2	1	7597.67924	3014.50316	2.52	0.0117
M3	1	25720	3520.51778	7.31	<.0001
M5	1	58524	4429.72077	13.21	<.0001
M6	1	66435	4281.11846	15.52	<.0001
M7	1	25295	3160.20422	8.00	<.0001
M10	1	-37565	3080.51520	-12.19	<.0001
M12	1	30784	2407.88192	12.78	<.0001
D2	1	3162.65011	1852.12059	1.71	0.0877
D4	1	4756.61261	1952.81327	2.44	0.0149
D5	1	9833.47086	1971.07695	4.99	<.0001
D6	1	7709.39318	1976.95334	3.90	<.0001
D2_S1	1	3304.09359	2261.12987	1.46	0.1440
D3_S1	1	7988.40641	1811.97364	4.41	<.0001
D4_S1	1	-3017.62593	2188.50884	-1.38	0.1680
D5_S1	1	-3363.37663	2202.80150	-1.53	0.1268
D6_S1	1	-7620.40674	2210.47227	-3.45	0.0006
D7_S1	1	-635.04671	1281.66154	-0.50	0.6203
D2_S2	1	7410.77786	2723.02320	2.72	0.0065
D3_S2	1	15711	2391.66026	6.57	<.0001
D4_S2	1	16249	2659.87222	6.11	<.0001
D5_S2	1	16890	2681.61271	6.30	<.0001
D6_S2	1	12381	2684.98257	4.61	<.0001
D7_S2	1	14030	2044.16592	6.86	<.0001

H2	1	-7407.06281	3178.67422	-2.33	0.0198
H3	1	-6704.52353	3178.70931	-2.11	0.0349
H4	1	-5036.97723	3307.69946	-1.52	0.1278
H6	1	22156	3310.85844	6.69	<.0001
H7	1	44946	3307.32506	13.59	<.0001
H8	1	54488	3311.85174	16.45	<.0001
H9	1	58697	3325.62095	17.65	<.0001
H10	1	59299	3349.10214	17.71	<.0001
H11	1	59778	3374.52809	17.71	<.0001
H12	1	56429	3395.89803	16.62	<.0001
H13	1	54835	3409.51303	16.08	<.0001
H14	1	56225	3417.72576	16.45	<.0001
H15	1	56247	3425.59086	16.42	<.0001
H16	1	54128	3427.84937	15.79	<.0001
H17	1	47709	3417.44271	13.96	<.0001
H18	1	45275	3405.11123	13.30	<.0001
H19	1	44556	4150.56572	10.73	<.0001
H20	1	57081	4084.79564	13.97	<.0001
H21	1	63457	4045.58133	15.69	<.0001
H22	1	44772	4044.81662	11.07	<.0001
H23	1	21080	4044.36612	5.21	<.0001
M3_H17	1	-20018	5006.59438	-4.00	<.0001
M3_H18	1	-10526	5082.63442	-2.07	0.0384
M4_H12	1	9904.30683	4928.41938	2.01	0.0445
M4_H13	1	10868	4928.91773	2.20	0.0275
M4_H14	1	12076	5000.61000	2.41	0.0157
M4_H15	1	9814.86858	5000.35393	1.96	0.0497
M4_H16	1	2007.93409	5001.80124	0.40	0.6881
M4_H17	1	-20144	5113.74236	-3.94	<.0001
M4_H18	1	-21845	10533	-2.07	0.0381
M9_H19	1	18734	5898.00399	3.18	0.0015
M9_H20	1	16102	5860.20650	2.75	0.0060
M9_H21	1	-1133.15071	5858.42650	-0.19	0.8466
M9_H22	1	-8996.79494	5858.33271	-1.54	0.1246
M9_H23	1	-5106.66688	5858.39897	-0.87	0.3834
M10_H14	1	7274.32537	4912.26614	1.48	0.1387
M10_H15	1	9257.26675	4912.10563	1.88	0.0595
M10_H16	1	4358.01600	4912.59514	0.89	0.3750
M10_H17	1	-14342	5021.83008	-2.86	0.0043
M10_H18	1	-13071	5019.87237	-2.60	0.0092
S_1_H2	1	4605.34352	3776.81961	1.22	0.2227
S_1_H3	1	4649.51265	3777.56241	1.23	0.2184
S_1_H4	1	5383.30719	3776.30094	1.43	0.1540
S_1_H5	1	10866	2236.93801	4.86	<.0001
S_1_H6	1	14335	3780.18107	3.79	0.0001
S_1_H7	1	14743	3776.35444	3.90	<.0001
S_1_H8	1	11184	3780.79612	2.96	0.0031
S_1_H9	1	8129.80607	3797.99100	2.14	0.0323
S_1_H10	1	6571.36899	3827.84590	1.72	0.0860
S_1_H11	1	4840.88833	3858.16462	1.25	0.2096
S_1_H12	1	920.25164	3945.21297	0.23	0.8156
S_1_H13	1	-133.65151	3962.92684	-0.03	0.9731
S_1_H14	1	-3684.81119	4063.44709	-0.91	0.3645
S_1_H15	1	-5502.34838	4070.05721	-1.35	0.1764
S_1_H16	1	1985.98653	4064.46266	0.49	0.6251
S_1_H17	1	23701	4165.73928	5.69	<.0001
S_1_H18	1	28610	4148.14447	6.90	<.0001
S_1_H19	1	25655	4572.27286	5.61	<.0001
S_1_H20	1	11135	4510.01097	2.47	0.0136

S_1_H21	1	-7885.14994	4448.99899	-1.77	0.0763
S_1_H22	1	-9560.56933	4447.67954	-2.15	0.0316
S_1_H23	1	-6370.01181	4446.68771	-1.43	0.1520
S_2_H2	1	-3137.50594	4385.98822	-0.72	0.4744
S_2_H3	1	-6509.07113	4387.20629	-1.48	0.1379
S_2_H4	1	-7827.94587	4387.87450	-1.78	0.0744
S_2_H5	1	-10178	3705.99337	-2.75	0.0060
S_2_H6	1	-18773	4508.57844	-4.16	<.0001
S_2_H7	1	-22592	4426.16783	-5.10	<.0001
S_2_H8	1	-13941	4393.87804	-3.17	0.0015
S_2_H9	1	-6973.94847	4411.68465	-1.58	0.1139
S_2_H10	1	-1940.35359	4419.16909	-0.44	0.6606
S_2_H11	1	1792.40765	4419.54362	0.41	0.6851
S_2_H12	1	3567.87211	4435.27489	0.80	0.4212
S_2_H13	1	5705.55188	4462.08129	1.28	0.2010
S_2_H14	1	6594.90849	4489.75182	1.47	0.1419
S_2_H15	1	6429.99189	4495.66892	1.43	0.1527
S_2_H16	1	8197.26047	4502.37337	1.82	0.0687
S_2_H17	1	5837.01790	4485.80163	1.30	0.1932
S_2_H18	1	1709.99478	4477.24919	0.38	0.7025
S_2_H19	1	6278.46554	5118.69545	1.23	0.2200
S_2_H20	1	2815.31990	5094.53303	0.55	0.5805
S_2_H21	1	3956.40267	4980.64840	0.79	0.4270
S_2_H22	1	2691.91178	4975.69164	0.54	0.5885
S_2_H23	1	2892.22024	4974.66450	0.58	0.5610
WE	1	-3624.65444	1824.25475	-1.99	0.0469
WE_H4	1	-2102.03354	3064.33372	-0.69	0.4927
WE_H5	1	-8871.95865	2952.12036	-3.01	0.0027
WE_H6	1	-27065	3066.86107	-8.82	<.0001
WE_H7	1	-39625	3066.88627	-12.92	<.0001
WE_H8	1	-33100	3066.89260	-10.79	<.0001
WE_H9	1	-25694	3067.01434	-8.38	<.0001
WE_H10	1	-22597	3067.02380	-7.37	<.0001
WE_H11	1	-22680	3067.09534	-7.39	<.0001
WE_H12	1	-20996	3067.23174	-6.85	<.0001
WE_H13	1	-24459	3067.39273	-7.97	<.0001
WE_H14	1	-26680	3068.87592	-8.69	<.0001
WE_H15	1	-23570	3068.81911	-7.68	<.0001
WE_H16	1	-20149	3068.85049	-6.57	<.0001
WE_H17	1	-13191	3069.88379	-4.30	<.0001
WE_H18	1	-12372	3069.75708	-4.03	<.0001
WE_H19	1	-10341	3068.86187	-3.37	0.0008
WE_H20	1	-10316	3068.07636	-3.36	0.0008
WE_H21	1	-7859.21912	3067.49220	-2.56	0.0104
WE_H22	1	-4805.39351	3067.54545	-1.57	0.1172
WE_H23	1	-1341.89568	3067.54406	-0.44	0.6618
WY2	1	3461.25623	2450.13189	1.41	0.1578
WY3	1	9291.14172	2374.60799	3.91	<.0001
WY4	1	-16746	2344.13466	-7.14	<.0001
WY6	1	-8372.70997	3312.16587	-2.53	0.0115
WY7	1	-13451	3572.26366	-3.77	0.0002
WY8	1	-34380	3710.04556	-9.27	<.0001
WY9	1	-39927	3809.29905	-10.48	<.0001
WY10	1	-41637	4290.80134	-9.70	<.0001
WY11	1	-55818	4730.71625	-11.80	<.0001
WY12	1	-64770	5034.29767	-12.87	<.0001
WY13	1	-85182	5370.97002	-15.86	<.0001
WY14	1	-75450	5130.12265	-14.71	<.0001
WY15	1	-103220	5557.05491	-18.57	<.0001

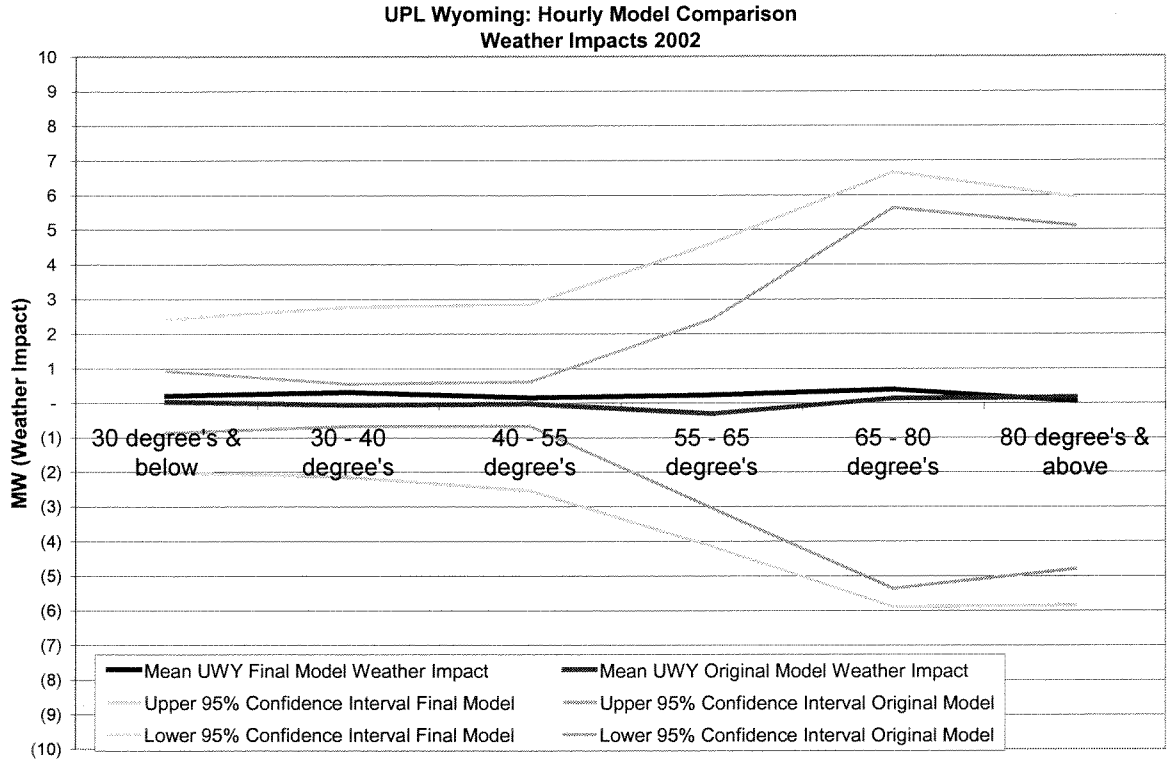
WY16	1	-102371	5976.32964	-17.13	<.0001
WY17	1	-116369	6400.43081	-18.18	<.0001
WY18	1	-103433	6550.79873	-15.79	<.0001
WY19	1	-113604	6956.26494	-16.33	<.0001
WY20	1	-158389	7321.07710	-21.63	<.0001
WY21	1	-135396	7588.51782	-17.84	<.0001
WY22	1	-141666	7758.39627	-18.26	<.0001
WY23	1	-148869	7660.08520	-19.43	<.0001
WY24	1	-142778	7829.19903	-18.24	<.0001
WY25	1	-143226	8056.71516	-17.78	<.0001
WY26	1	-152419	8185.73425	-18.62	<.0001
WY27	1	-119422	7399.29140	-16.14	<.0001
WY28	1	-107177	7211.40340	-14.86	<.0001
WY29	1	-108874	7044.63450	-15.45	<.0001
WY30	1	-106117	6806.46883	-15.59	<.0001
WY31	1	-74357	6122.46617	-12.15	<.0001
WY32	1	-61010	5498.87496	-11.09	<.0001
WY33	1	-65857	5125.37671	-12.85	<.0001
WY34	1	-53596	4875.63735	-10.99	<.0001
WY35	1	-28152	4539.13952	-6.20	<.0001
WY36	1	-15672	3900.41425	-4.02	<.0001
WY37	1	-28394	3576.45915	-7.94	<.0001
WY38	1	-19190	3371.55351	-5.69	<.0001
WY39	1	-6565.05871	3234.79534	-2.03	0.0424
WY41	1	-11336	2472.36351	-4.59	<.0001
WY42	1	7859.34321	2362.30080	3.33	0.0009
WY44	1	27331	2225.92928	12.28	<.0001
WY45	1	27240	2361.67509	11.53	<.0001
WY46	1	8837.30755	2367.74917	3.73	0.0002
WY47	1	15974	2341.70195	6.82	<.0001
WY48	1	33587	2354.25611	14.27	<.0001
WY49	1	13502	2532.91339	5.33	<.0001
WY50	1	12989	2810.12572	4.62	<.0001
WY51	1	6959.74731	2808.06371	2.48	0.0132
WY52	1	-12829	2812.17219	-4.56	<.0001
H18_WY14	1	-443.43729	11810	-0.04	0.9700
H18_WY15	1	-45.76128	13905	-0.00	0.9974
H18_WY16	1	-9978.82888	13913	-0.72	0.4732
H18_WY17	1	-4433.55411	13911	-0.32	0.7499
H19_WY14	1	-5250.96156	9568.55360	-0.55	0.5832
H19_WY15	1	-16006	9580.32427	-1.67	0.0948
H19_WY16	1	-27614	9592.11030	-2.88	0.0040
H19_WY17	1	-21014	9594.09306	-2.19	0.0285
H19_WY18	1	-9024.97931	9579.42186	-0.94	0.3461
H20_WY16	1	-4134.70914	9573.90722	-0.43	0.6658
H20_WY17	1	4367.28591	9574.52300	0.46	0.6483

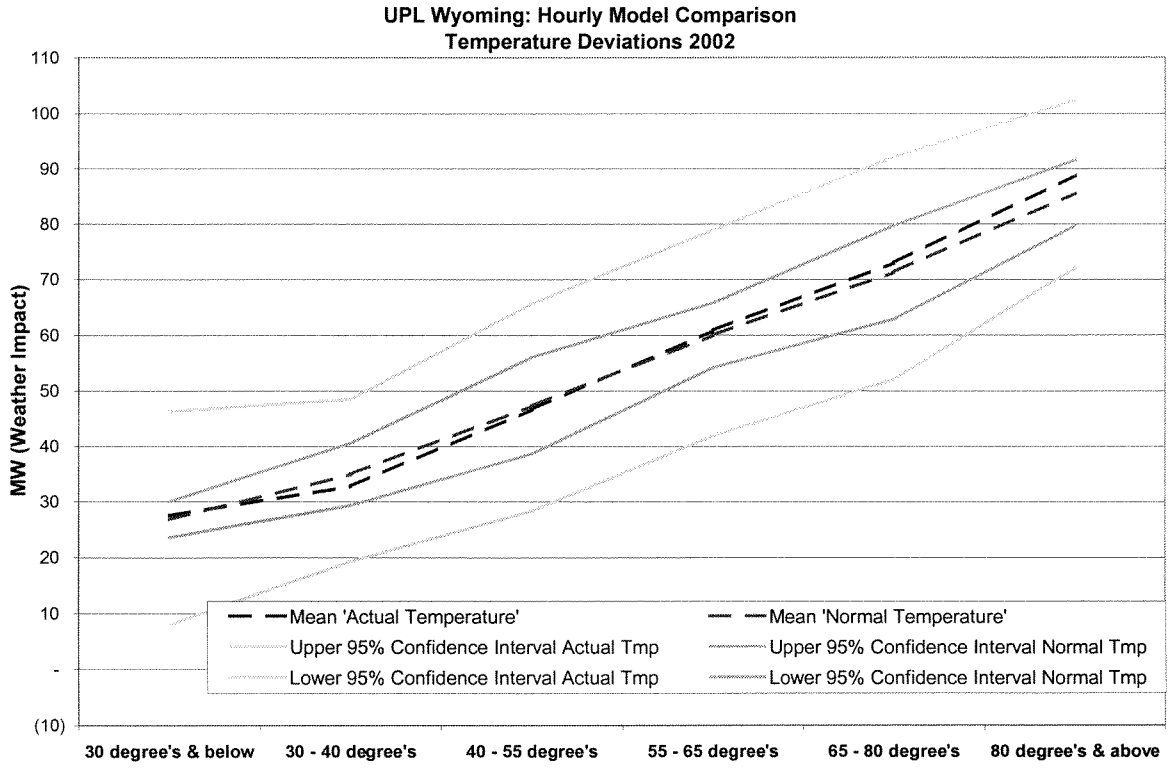
WYOMING APPENDIX

WEST

UPL Wyoming Appendix

Weather Impacts for each of the hourly models





Model Statistics by Month, Hour & Day of Week

UPL Wyoming **Model Statistics**

Month of Year	*Final Model*	*Original Model*	*Final Model*	*Original Model*	*Final Model*	*Original Model*
2002 Stats	Mean of Calibrated Estimate % Error	Mean of Calibrated % Error	Mean of Calibrated ABS % Error	Mean of ABS Calibrated % Error	Sum of Tmp Impact	Sum of Weather Impact
Jan	-5.8%	-6.4%	5.9%	6.5%	14,681	(46,778)
Feb	-6.6%	-7.4%	6.6%	7.5%	(181,873)	(200,593)
Mar	1.4%	1.3%	4.8%	4.3%	123,845	12,425
Apr	-4.1%	-5.0%	4.7%	5.3%	(76,441)	(18,078)
May	-0.5%	-0.9%	3.2%	2.7%	217,838	(683,262)
Jun	2.0%	0.4%	5.0%	5.0%	(60,257)	(299,399)
Jul	2.7%	2.7%	4.4%	4.3%	(663,132)	(356,113)
Aug	2.8%	2.3%	4.1%	3.5%	1,783,438	1,529,792
Sep	2.0%	1.8%	4.4%	4.3%	(185,477)	(219,157)
Oct	8.8%	7.7%	9.8%	9.0%	231,425	(12,109)
Nov	1.0%	2.7%	2.4%	3.8%	209,586	(79,025)
Dec	-1.0%	-1.5%	2.5%	2.8%	708,555	197,434
Grand Total	0.3%	-0.1%	4.8%	4.9%	2,122,188	(174,864)

Hours of Day	*Final Model*	*Original Model*	*Final Model*	*Original Model*	*Final Model*	*Original Model*
2002 Stats	Mean of Calibrated Estimate % Error	Mean of Calibrated % Error	Mean of Calibrated ABS % Error	Mean of ABS Calibrated % Error	Sum of Tmp Impact	Sum of Weather Impact
HR1	-0.5%	-0.7%	4.7%	4.9%	145,005	70,243
HR2	-0.6%	-0.7%	4.6%	4.8%	147,066	84,846
HR3	-0.5%	-0.7%	4.6%	4.8%	136,427	65,000
HR4	-0.1%	-0.6%	4.5%	4.7%	138,639	71,866
HR5	0.1%	-0.5%	4.6%	4.6%	129,962	63,190
HR6	0.0%	-0.4%	4.6%	4.7%	108,375	29,019
HR7	0.5%	0.2%	4.6%	4.6%	50,238	(58,028)
HR8	0.6%	0.3%	4.5%	4.6%	(34,432)	(145,115)
HR9	0.7%	0.3%	4.6%	4.7%	(55,708)	(171,893)
HR10	0.6%	0.2%	5.0%	4.9%	(47,499)	(191,279)
HR11	0.5%	0.1%	4.9%	4.9%	(36,716)	(191,270)
HR12	0.5%	0.1%	4.9%	5.0%	(3,034)	(156,488)
HR13	0.3%	0.0%	5.0%	5.0%	20,949	(122,768)
HR14	0.4%	0.0%	5.1%	5.1%	41,938	(96,548)
HR15	0.3%	-0.2%	5.1%	5.2%	54,900	(87,730)
HR16	0.2%	-0.3%	5.1%	5.3%	74,517	(51,081)
HR17	0.4%	-0.2%	5.2%	5.3%	98,801	(12,942)
HR18	0.7%	0.1%	5.1%	5.0%	143,788	55,482
HR19	0.6%	0.1%	5.1%	5.0%	193,547	153,656
HR20	0.8%	0.3%	4.9%	4.9%	222,149	202,083
HR21	0.7%	0.3%	4.7%	4.9%	173,291	116,789
HR22	0.7%	0.3%	5.0%	4.7%	141,049	72,395
HR23	0.1%	-0.3%	4.8%	4.7%	142,244	62,676
HR24	-0.2%	-0.6%	4.8%	4.9%	136,695	63,032
Grand Total	0.3%	-0.1%	4.8%	4.9%	2,122,188	(174,864)

Day of Week	*Final Model*	*Original Model*	*Final Model*	*Original Model*	*Final Model*	*Original Model*
2002 Stats	Mean of Calibrated Estimate % Error	Mean of Calibrated % Error	Mean of Calibrated ABS % Error	Mean of ABS Calibrated % Error	Sum of Tmp Impact	Sum of Weather Impact
Sun	-0.1%	-0.5%	4.8%	4.7%	221,356	112,960
Mon	0.4%	0.0%	4.7%	4.7%	388,065	61,724
Tue	-0.4%	-1.1%	5.2%	5.5%	271,613	(110,699)
Wed	0.8%	0.3%	5.3%	5.1%	337,643	(18,580)
Thu	1.0%	0.5%	4.8%	4.7%	466,584	(75,303)
Fri	0.3%	0.1%	4.4%	4.6%	180,225	(108,945)
Sat	0.1%	-0.1%	4.6%	5.0%	256,702	(36,021)
Grand Total	0.3%	-0.1%	4.8%	4.9%	2,122,188	(174,864)

UPL Wyoming *Original* Hourly Splines & Variables

The REG Procedure
Model: MODEL1
Dependent Variable: UWY

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	178	3.593541E12	20188431825	99.78	<.0001
Error	26125	5.285759E12	202325699		
Corrected Total	26303	8.8793E12			

Root MSE	14224	R-Square	0.4047
Dependent Mean	139497	Adj R-Sq	0.4007
Coeff Var	10.19671		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-67448	7963.73457	-8.47	<.0001
SLC_SUN	1	172.68310	13.43254	12.86	<.0001
UWY_MA	1	0.87236	0.01023	85.30	<.0001
SLC_HDD	1	47.19332	18.96561	2.49	0.0128
SLC_CDDS	1	-82.28656	90.80856	-0.91	0.3649
SLC_CDD	1	389.49309	28.01788	13.90	<.0001
SLC_S2_HCDD	1	-213.94325	22.63556	-9.45	<.0001
S_1	1	3783.34377	1399.04264	2.70	0.0069
S_2	1	6468.91874	1599.39536	4.04	<.0001
H1	1	85.28314	1403.82867	0.06	0.9516
H2	1	-107.36756	1403.82987	-0.08	0.9390
H3	1	-70.17688	1403.90815	-0.05	0.9601
H4	1	-29.77505	1403.95197	-0.02	0.9831
H5	1	2316.06427	1404.39091	1.65	0.0991
H6	1	5421.50926	1404.31984	3.86	0.0001
H7	1	7409.21081	1403.85377	5.28	<.0001
H8	1	7532.17383	1404.02180	5.36	<.0001
H9	1	7373.81097	1405.74608	5.25	<.0001
H10	1	6767.79551	1410.34850	4.80	<.0001
H11	1	6223.50876	1416.45922	4.39	<.0001
H12	1	5251.80885	1421.33749	3.69	0.0002
H13	1	5264.63590	1426.14282	3.69	0.0002
H14	1	4968.67927	1429.09987	3.48	0.0005
H15	1	3993.32671	1431.37835	2.79	0.0053
H16	1	3092.67322	1431.06310	2.16	0.0307
H17	1	3383.58349	1434.75807	2.36	0.0184
H18	1	3957.28422	1427.22819	2.77	0.0056
H19	1	5384.16092	1417.31577	3.80	0.0001
H20	1	6915.75763	1412.36509	4.90	<.0001
H21	1	8169.57932	1404.37121	5.82	<.0001
H22	1	5148.21097	1403.96667	3.67	0.0002
H23	1	2386.49164	1403.79999	1.70	0.0891
S_1_H1	1	29.96752	1560.09262	0.02	0.9847

S_1_H2	1	220.97984	1560.10823	0.14	0.8874
S_1_H3	1	580.95057	1560.30145	0.37	0.7096
S_1_H4	1	1047.11767	1560.10350	0.67	0.5021
S_1_H5	1	885.38472	1560.61981	0.57	0.5705
S_1_H6	1	1877.88032	1560.48028	1.20	0.2288
S_1_H7	1	1671.59669	1560.22420	1.07	0.2840
S_1_H8	1	475.94321	1560.37905	0.31	0.7604
S_1_H9	1	283.87235	1562.12165	0.18	0.8558
S_1_H10	1	89.49239	1567.02885	0.06	0.9545
S_1_H11	1	-71.02449	1573.43777	-0.05	0.9640
S_1_H12	1	-12.17705	1578.80096	-0.01	0.9938
S_1_H13	1	-511.42659	1583.64027	-0.32	0.7467
S_1_H14	1	-485.40778	1586.87080	-0.31	0.7597
S_1_H15	1	-455.59115	1588.72306	-0.29	0.7743
S_1_H16	1	315.80964	1588.16346	0.20	0.8424
S_1_H17	1	3010.80985	1602.19873	1.88	0.0602
S_1_H18	1	4526.64007	1594.27064	2.84	0.0045
S_1_H19	1	3945.88521	1584.57962	2.49	0.0128
S_1_H20	1	1457.43243	1575.50762	0.93	0.3549
S_1_H21	1	-1646.25166	1560.74946	-1.05	0.2915
S_1_H22	1	-1237.33776	1560.27277	-0.79	0.4278
S_1_H23	1	-362.99516	1560.08712	-0.23	0.8160
S_2_H1	1	-941.62024	1878.52405	-0.50	0.6162
S_2_H2	1	-986.40874	1879.06560	-0.52	0.5996
S_2_H3	1	-1378.17110	1879.89874	-0.73	0.4635
S_2_H4	1	-1059.77005	1880.94188	-0.56	0.5732
S_2_H5	1	-1748.66307	1883.09150	-0.93	0.3531
S_2_H6	1	-3208.80077	1883.09229	-1.70	0.0884
S_2_H7	1	-4116.95413	1879.36206	-2.19	0.0285
S_2_H8	1	-2841.23538	1879.02159	-1.51	0.1305
S_2_H9	1	-974.39636	1882.52435	-0.52	0.6047
S_2_H10	1	164.30031	1888.79525	0.09	0.9307
S_2_H11	1	1266.62304	1895.60037	0.67	0.5040
S_2_H12	1	2224.66534	1901.00635	1.17	0.2419
S_2_H13	1	1999.50265	1904.11697	1.05	0.2937
S_2_H14	1	2726.11271	1905.99517	1.43	0.1526
S_2_H15	1	2483.02324	1908.49822	1.30	0.1933
S_2_H16	1	2774.22582	1910.10731	1.45	0.1464
S_2_H17	1	2412.03690	1913.25070	1.26	0.2074
S_2_H18	1	1925.97922	1909.04760	1.01	0.3130
S_2_H19	1	215.14168	1899.12265	0.11	0.9098
S_2_H20	1	-1096.41220	1889.21716	-0.58	0.5617
S_2_H21	1	-479.13751	1880.70223	-0.25	0.7989
S_2_H22	1	574.23230	1879.29549	0.31	0.7599
S_2_H23	1	190.29862	1878.67658	0.10	0.9193
D1	1	-178.78923	328.69778	-0.54	0.5865
D2	1	-927.43240	684.60011	-1.35	0.1755
D3	1	-1426.05471	706.36394	-2.02	0.0435
D4	1	-615.86097	713.69697	-0.86	0.3882
D5	1	-619.06955	702.62534	-0.88	0.3783
D6	1	-629.67106	706.21208	-0.89	0.3726
WE	1	-1121.64146	1113.95376	-1.01	0.3140
WE_H1	1	-522.82781	1314.72577	-0.40	0.6909
WE_H2	1	-640.67651	1314.72117	-0.49	0.6260
WE_H3	1	-873.47510	1315.41483	-0.66	0.5067
WE_H4	1	-874.73209	1314.07333	-0.67	0.5056
WE_H5	1	-2090.31761	1314.75873	-1.59	0.1119
WE_H6	1	-4606.51031	1314.77237	-3.50	0.0005
WE_H7	1	-5759.62191	1314.81371	-4.38	<.0001

WE_H8	1	-4439.71913	1314.75258	-3.38	0.0007
WE_H9	1	-4038.23674	1314.83805	-3.07	0.0021
WE_H10	1	-3758.96671	1314.79334	-2.86	0.0043
WE_H11	1	-3515.24085	1314.88513	-2.67	0.0075
WE_H12	1	-3658.58040	1314.89019	-2.78	0.0054
WE_H13	1	-4074.42704	1314.93150	-3.10	0.0019
WE_H14	1	-4334.04973	1314.93331	-3.30	0.0010
WE_H15	1	-3708.26445	1314.86534	-2.82	0.0048
WE_H16	1	-2893.88182	1314.88756	-2.20	0.0278
WE_H17	1	-2546.16557	1315.03199	-1.94	0.0529
WE_H18	1	-2509.39278	1314.99474	-1.91	0.0564
WE_H19	1	-2370.36064	1314.95406	-1.80	0.0715
WE_H20	1	-2132.89110	1314.88764	-1.62	0.1048
WE_H21	1	-1643.54840	1314.78097	-1.25	0.2113
WE_H22	1	-852.09917	1314.75968	-0.65	0.5169
WE_H23	1	-853.59802	1314.79924	-0.65	0.5162
WY1	1	-14688	1171.62906	-12.54	<.0001
WY2	1	-17233	1034.86980	-16.65	<.0001
WY3	1	-18193	1055.48995	-17.24	<.0001
WY4	1	-20342	1109.16610	-18.34	<.0001
WY5	1	-21325	1178.25782	-18.10	<.0001
WY6	1	-24878	1290.14835	-19.28	<.0001
WY7	1	-28531	1443.51475	-19.76	<.0001
WY8	1	-32853	1627.44167	-20.19	<.0001
WY9	1	-34910	1835.08396	-19.02	<.0001
WY10	1	-39033	2105.99334	-18.53	<.0001
WY11	1	-39502	2332.05937	-16.94	<.0001
WY12	1	-42666	2558.96697	-16.67	<.0001
WY13	1	-44144	2788.57831	-15.83	<.0001
WY14	1	-53914	3033.55912	-17.77	<.0001
WY15	1	-57557	3265.15248	-17.63	<.0001
WY16	1	-62247	3495.25732	-17.81	<.0001
WY17	1	-67368	3721.18435	-18.10	<.0001
WY18	1	-69646	3873.79090	-17.98	<.0001
WY19	1	-72327	4031.37966	-17.94	<.0001
WY20	1	-76508	4212.84556	-18.16	<.0001
WY21	1	-79921	4374.34601	-18.27	<.0001
WY22	1	-85756	4508.03694	-19.02	<.0001
WY23	1	-90638	4613.48971	-19.65	<.0001
WY24	1	-87236	4666.48434	-18.69	<.0001
WY25	1	-86666	4686.83958	-18.49	<.0001
WY26	1	-88950	4694.16355	-18.95	<.0001
WY27	1	-86409	4648.81690	-18.59	<.0001
WY28	1	-93605	4568.77902	-20.49	<.0001
WY29	1	-83477	4461.18338	-18.71	<.0001
WY30	1	-82136	4325.49587	-18.99	<.0001
WY31	1	-78915	4165.53101	-18.94	<.0001
WY32	1	-76639	3992.00687	-19.20	<.0001
WY33	1	-72904	3799.37116	-19.19	<.0001
WY34	1	-74719	3595.22500	-20.78	<.0001
WY35	1	-68802	3382.12803	-20.34	<.0001
WY36	1	-66048	3132.02636	-21.09	<.0001
WY37	1	-58734	2931.94496	-20.03	<.0001
WY38	1	-53547	2719.84763	-19.69	<.0001
WY39	1	-47167	2513.99444	-18.76	<.0001
WY40	1	-48254	2267.32383	-21.28	<.0001
WY41	1	-54265	2091.84991	-25.94	<.0001
WY42	1	-47785	1889.64860	-25.29	<.0001
WY43	1	-44562	1705.04962	-26.14	<.0001

WY44	1	-39444	1516.66704	-26.01	<.0001
WY45	1	-29157	1337.96708	-21.79	<.0001
WY46	1	-19876	1202.41020	-16.53	<.0001
WY47	1	-15673	1114.06469	-14.07	<.0001
WY48	1	-11162	1066.01177	-10.47	<.0001
WY49	1	-8659.28455	1045.32462	-8.28	<.0001
WY50	1	-4955.95280	1031.46699	-4.80	<.0001
WY51	1	-3432.99540	1028.87935	-3.34	0.0008
WY52	1	-4807.72039	1028.94324	-4.67	<.0001
H17_WY14	1	-2839.61975	3238.18016	-0.88	0.3805
H17_WY15	1	-6388.21001	3242.79424	-1.97	0.0489
H17_WY16	1	-2220.56756	3242.06506	-0.68	0.4934
H17_WY17	1	-1939.39715	3241.75860	-0.60	0.5497
H18_WY14	1	-5821.46814	3238.19500	-1.80	0.0722
H18_WY15	1	-8387.10826	3241.86501	-2.59	0.0097
H18_WY16	1	-4528.59496	3241.38988	-1.40	0.1624
H18_WY17	1	-3970.79952	3241.45629	-1.23	0.2206
H19_WY14	1	-3404.07716	3237.81787	-1.05	0.2931
H19_WY15	1	-8305.50038	3242.79205	-2.56	0.0104
H19_WY16	1	-5064.45650	3241.32873	-1.56	0.1182
H19_WY17	1	-4994.28509	3242.86019	-1.54	0.1236
H17_WY18	1	-684.34301	3230.51532	-0.21	0.8322
H18_WY18	1	-1770.32989	3229.46600	-0.55	0.5836
H19_WY18	1	-3791.80299	3229.83480	-1.17	0.2404
H20_WY15	1	-4138.95042	3239.44791	-1.28	0.2014
H20_WY16	1	-1600.41874	3239.10002	-0.49	0.6212
H20_WY17	1	-1323.67628	3239.13639	-0.41	0.6828
H20_WY18	1	-1527.08778	3228.04029	-0.47	0.6362

UPL Wyoming *Final* Hourly Splines & Variables

The REG Procedure
Model: MODEL1
Dependent Variable: UWY

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	125	3.652345E12	29218756121	146.34	<.0001
Error	26178	5.226955E12	199669770		
Corrected Total	26303	8.8793E12			

Root MSE	14130	R-Square	0.4113
Dependent Mean	139497	Adj R-Sq	0.4085
Coeff Var	10.12956		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-40772	6799.13603	-6.00	<.0001
UWY_MA	1	0.85456	0.01016	84.07	<.0001
SLC_SUN	1	45.56665	8.97110	5.08	<.0001
Day_SLC_Min	1	311.40039	25.55142	12.19	<.0001
SLC_CDD65Pl	1	243.35356	28.60100	8.51	<.0001
LagDay_SLC_Max	1	-237.83410	25.15880	-9.45	<.0001
SLC_HDD57Le	1	-142.09586	23.32517	-6.09	<.0001
SLC_S2_HCDD	1	-157.01566	21.36038	-7.35	<.0001
S_1	1	42502	2167.37028	19.61	<.0001
M1	1	6003.88393	2381.02095	2.52	0.0117
M2	1	8418.40783	2174.50020	3.87	0.0001
M3	1	14724	1937.76274	7.60	<.0001
M5	1	28672	1799.54627	15.93	<.0001
M6	1	17651	1738.63143	10.15	<.0001
M7	1	16408	1539.84989	10.66	<.0001
M8	1	11700	1254.38546	9.33	<.0001
M10	1	-20417	1781.01562	-11.46	<.0001
M11	1	17789	2518.49535	7.06	<.0001
M12	1	14886	2508.31129	5.93	<.0001
D3_S1	1	-541.78223	339.35277	-1.60	0.1104
D6_S1	1	-902.33641	342.86219	-2.63	0.0085
D3_S2	1	-1240.50051	548.74892	-2.26	0.0238
H6	1	4702.73156	1028.81376	4.57	<.0001
H7	1	6738.86216	1028.54357	6.55	<.0001
H8	1	7017.03598	552.99869	12.69	<.0001
H9	1	7026.94954	557.22772	12.61	<.0001
H10	1	6447.30745	564.88477	11.41	<.0001
H11	1	5224.63024	615.20618	8.49	<.0001
H12	1	5861.64912	1053.19573	5.57	<.0001
H13	1	6031.70744	1060.36879	5.69	<.0001
H14	1	5832.11339	1064.39515	5.48	<.0001
H15	1	4922.98980	1067.61479	4.61	<.0001
H16	1	4009.75641	1067.19530	3.76	0.0002

H17	1	3888.10739	546.21902	7.12	<.0001
H18	1	4117.78727	1008.35151	4.08	<.0001
H19	1	6069.68152	786.62165	7.72	<.0001
H20	1	5711.89212	788.40224	7.24	<.0001
H21	1	7900.21688	702.14405	11.25	<.0001
H22	1	4309.20521	467.06431	9.23	<.0001
H23	1	1997.40518	465.88042	4.29	<.0001
M3_H18	1	-3865.84376	1673.05559	-2.31	0.0209
M9_H20	1	3426.36007	1705.50167	2.01	0.0445
M10_H18	1	-3991.94286	1671.00803	-2.39	0.0169
S_1_H5	1	2891.57875	603.10575	4.79	<.0001
S_1_H6	1	2576.61530	1138.60329	2.26	0.0236
S_1_H7	1	2291.18096	1137.73226	2.01	0.0440
S_1_H12	1	-2298.94056	1155.98394	-1.99	0.0467
S_1_H13	1	-3123.43504	1162.61919	-2.69	0.0072
S_1_H14	1	-3293.80364	1166.47287	-2.82	0.0048
S_1_H15	1	-3342.42218	1168.66191	-2.86	0.0042
S_1_H16	1	-2480.79207	1167.53045	-2.12	0.0336
S_1_H18	1	3925.88293	1244.58026	3.15	0.0016
S_1_H19	1	1675.55050	925.61807	1.81	0.0703
S_1_H20	1	1305.34469	969.28509	1.35	0.1781
S_1_H21	1	-2171.36479	902.46001	-2.41	0.0161
S_2_H6	1	-2660.76280	1366.31471	-1.95	0.0515
S_2_H7	1	-3355.59668	1361.86059	-2.46	0.0137
S_2_H11	1	3520.40418	1115.85444	3.15	0.0016
S_2_H12	1	3052.00184	1384.69013	2.20	0.0275
S_2_H13	1	2776.37266	1388.48052	2.00	0.0456
S_2_H14	1	3462.96698	1390.37676	2.49	0.0128
S_2_H15	1	3223.53069	1393.08976	2.31	0.0207
S_2_H16	1	3507.16341	1394.77150	2.51	0.0119
S_2_H17	1	3125.08142	1142.06658	2.74	0.0062
S_2_H18	1	2829.93502	1388.88860	2.04	0.0416
WE	1	-1841.63775	274.84717	-6.70	<.0001
WE_H6	1	-3321.10547	961.27927	-3.45	0.0006
WE_H7	1	-4442.76128	961.27869	-4.62	<.0001
WE_H8	1	-3087.03616	961.18245	-3.21	0.0013
WE_H9	1	-2667.50481	961.18835	-2.78	0.0055
WE_H10	1	-2404.22998	961.18394	-2.50	0.0124
WE_H11	1	-2159.36308	961.26803	-2.25	0.0247
WE_H12	1	-2274.66270	961.27688	-2.37	0.0180
WE_H13	1	-2695.19931	961.28370	-2.80	0.0051
WE_H14	1	-2967.65266	961.30636	-3.09	0.0020
WE_H15	1	-2368.69188	961.26330	-2.46	0.0137
WE_H16	1	-1527.83109	961.26583	-1.59	0.1120
WE_H19	1	-1012.15939	961.25465	-1.05	0.2924
WY6	1	-3294.95066	1146.05245	-2.88	0.0040
WY7	1	-4940.38650	1238.77877	-3.99	<.0001
WY8	1	-6725.85997	1275.09370	-5.27	<.0001
WY9	1	-8323.58131	1303.98178	-6.38	<.0001
WY10	1	-13157	1551.55831	-8.48	<.0001
WY11	1	-13137	1670.70508	-7.86	<.0001
WY12	1	-12674	1752.19357	-7.23	<.0001
WY13	1	-11903	1828.85330	-6.51	<.0001
WY14	1	-18628	1880.08580	-9.91	<.0001
WY15	1	-19934	2069.37638	-9.63	<.0001
WY16	1	-22471	2145.91796	-10.47	<.0001
WY17	1	-25713	2233.95400	-11.51	<.0001
WY18	1	-27974	2219.79001	-12.60	<.0001
WY19	1	-31207	2308.42916	-13.52	<.0001

WY20	1	-35071	2388.88298	-14.68	<.0001
WY21	1	-36658	2462.45555	-14.89	<.0001
WY22	1	-41509	2476.16830	-16.76	<.0001
WY23	1	-37491	2425.31808	-15.46	<.0001
WY24	1	-29732	2469.40948	-12.04	<.0001
WY25	1	-27700	2492.07981	-11.12	<.0001
WY26	1	-29752	2503.08778	-11.89	<.0001
WY27	1	-27457	2273.36557	-12.08	<.0001
WY28	1	-34831	2237.77412	-15.56	<.0001
WY29	1	-26175	2192.25641	-11.94	<.0001
WY30	1	-25823	2129.13153	-12.13	<.0001
WY31	1	-22787	1939.01514	-11.75	<.0001
WY32	1	-20042	1804.74857	-11.11	<.0001
WY33	1	-17500	1731.26472	-10.11	<.0001
WY34	1	-20576	1643.22578	-12.52	<.0001
WY35	1	-16892	1538.02485	-10.98	<.0001
WY36	1	-11102	965.15158	-11.50	<.0001
WY37	1	-3554.83633	856.56960	-4.15	<.0001
WY39	1	3471.08003	815.78784	4.25	<.0001
WY41	1	-8553.71549	832.03751	-10.28	<.0001
WY42	1	-4012.08562	799.88661	-5.02	<.0001
WY44	1	-5549.89711	800.26713	-6.94	<.0001
WY45	1	-12325	989.96669	-12.45	<.0001
WY46	1	-9477.78822	1068.83307	-8.87	<.0001
WY47	1	-7046.90494	1086.15501	-6.49	<.0001
WY48	1	-4447.87527	1084.85621	-4.10	<.0001
WY50	1	2805.86076	822.09808	3.41	0.0006
WY51	1	3386.83449	825.25780	4.10	<.0001
WY52	1	1755.42891	828.89759	2.12	0.0342
H18_WY14	1	-5800.62009	3230.69313	-1.80	0.0726
H18_WY15	1	-9544.88992	3240.61778	-2.95	0.0032
H18_WY16	1	-5632.19473	3236.38679	-1.74	0.0818
H18_WY17	1	-5290.40921	3236.77338	-1.63	0.1022
H19_WY15	1	-7756.48867	3207.18564	-2.42	0.0156