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Birmingham, AL 35203-8180

205/257-4070



November 30, 2010

Project No. 349
Martin Project

Project No. 2407
Yates/Thurlow Project

Subject: Proposed Temporary Drought-Based Rule Curve Variance
by electronic filing

Ms. Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington DC 20426

Dear Ms. Bose:

The State of Alabama and other southeastern states are currently experiencing the onset and/or intensifying of drought conditions, which continue to linger despite recent small rainfall events that have occurred this fall. Rainfall projections by the State Climatologist and National Weather Service for the upcoming months are not encouraging for water managers because of the onset of La Niña weather patterns.

As a result of the impacts these continuing and forecasted drought conditions pose to our Federal Energy Regulatory Commission (FERC or Commission) Projects, Alabama Power Company (APC or Licensee), licensee for the Martin Dam Project (FERC No. 349), hereby submits its request for a temporary drought-based variance to the Martin rule curve.

This request will allow Licensee to hold the Martin winter pool 3 feet higher, upon approval, until that elevation intersects with the normal rising limb of the rule curve. Part of that process of storing extra water will require some modification in the minimum flows from the Yates/Thurlow Project, FERC No. 2407, consistent with Article 401 of that license.

Details of this request are found in the attached "Proposed Temporary Drought-Based Rule Curve Variance" package.

Due to the need to expedite Commission review and approval of this request, Licensee is concurrently providing copies of this proposed variance to the appropriate state and federal resource agencies. We will file, with the Commission, copies of any comments and correspondence from those appropriate state and federal resource agencies as Alabama Power receives such.

Please contact me at 205-257-4070 if you need additional information.

Sincerely,

A handwritten signature in black ink that reads "Jason Powers". The signature is written in a cursive style with a large, looped initial "J" and "P".

Jason Powers
APC Hydro Services
Alabama Power Company

JEP/jep
Enclosure

cc: Mr. Bryan Atkins, Alabama Office of Water Resources
Mr. Lynn Sisk, Alabama Department of Environmental Management
Mr. Stan Cook, Alabama Department of Conservation and Natural Resources
Mr. Bill Pearson, U.S. Fish and Wildlife Service

**Proposed Temporary Drought-Based
Rule Curve Variance**

Martin Project

FERC Project P-349

Yates/Thurlow Project

FERC Project P-2407

November 30, 2010

Introduction

The State of Alabama and other southeastern states are currently experiencing the onset and/or intensifying of drought conditions, which continue to linger despite recent small rainfall events that have occurred this fall. During the summer of 2010, many areas in the state experienced record setting temperatures and stretches of days where daily high temperatures exceeded 90 degrees or more, as well as below normal precipitation. The temperature extremes and lack of rainfall took a toll not only on our reservoirs, but also on groundwater sources.

Drought conditions continue and rainfall projections for the upcoming months are not encouraging for water managers. The U.S. Drought Monitor (Attachment 1) indicates that all of the state of Alabama and all of the Alabama Power Company (Alabama Power or APC) project basins are in some level of drought intensity, with the Tallapoosa basin being the most impacted of those. The U.S. Seasonal Drought Outlook (Attachment 2) shows that much of the area already impacted is expected to persist and/or intensify, with only some portions, mostly north of our basins, expected to improve. The National Weather Service (NWS) has predicted that La Niña conditions will present us with challenges due to the warmer and drier conditions that La Niña brings to our region (see Attachment 3). That prediction is consistent with the latest NWS Three Month precipitation outlook (Attachment 4). John Christy, Alabama's State Climatologist, was quoted in a November 11th Montgomery Advertiser article as saying "It's a grim prospect for water resources no doubt" (Attachment 5). The quote came as Mr. Christy was addressing the November 10, 2010 meeting of the Monitoring and Analysis Group (MAG), a sub-group of the larger Alabama Drought Assessment and Planning Team (ADAPT). ADAPT serves in an advisory capacity to the Office of Water Resources (OWR) and the Governor's Office, to coordinate intergovernmental drought response and management and in the implementation of all drought-related activities.

Alabama Power has been monitoring the declining conditions closely and has followed our proposed Alabama-ACT Drought Operations Plan (ADROP) during these conditions. ADROP was developed as a result of the 2007 drought of record. It has been presented to and has received favorable comments from numerous state and federal agencies, and has been in a state of refinement over the last 3 years. According to ADROP, conditions within the Coosa and Tallapoosa basins would have triggered drought responses in the Alabama River since the middle of August 2010.

Consistent with ADROP, subsequent to the initial meeting of the MAG, Alabama Power hosted a meeting with various state and federal agencies on October 27th, 2010 to discuss a possible 10% reduction in flows released from its Coosa and Tallapoosa projects to the Alabama River. Subsequent to that meeting, Alabama Power requested the U.S. Army Corps

of Engineers (USACE) concurrence with a 10% reduction in those releases, and on November 8, 2010, the USACE issued their concurrence for that reduction. On November 9, 2010 and consistent with ADROP administration, Alabama Power requested temporary drought-based winter pool rule curve variances from the USACE at our Weiss (FERC Project No. 2146), Logan Martin (FERC Project No. 2146), and Harris (FERC Project No. 2628) projects. These variances, once approved by the USACE, will allow APC to store additional water during the forecasted dry conditions into the winter and spring.

Unlike the drought we experienced in 2007 into 2008, our reservoirs are in good shape today, thanks to a few recent rain events, as we head into the winter months. However, given the grim precipitation outlook by the NWS and our state climatologist, Alabama Power is concerned about the real possibility of not being able to fill all of our storage reservoirs to their normal elevations next spring. This could result in the inability of Alabama Power to fully meet various needs and requirements placed on our reservoirs as we move through the 2011 year. Facing potential drought conditions that cannot be fully understood today, it is imperative that we prepare by taking the necessary steps now at our projects to attempt to minimize, as much as possible, any potential effects of this extended drought situation as forecast by the NWS.

To this end Alabama Power is requesting FERC approval for a temporary drought-based variance to the Martin Project rule curve. This Martin rule curve temporary drought-based variance would be for a period from January 1, 2011 to March 1, 2011.

Variance Request

The request for a temporary drought-based variance is to maintain the winter pool elevation 3 feet higher than normal, at El. 483, martin datum (MD) instead of El. 480 MD, beginning January 1, 2011 until it intersects with the normal rising limb of the rule curve on March 1, 2011. This would give APC an approximate 2 month running start at preparing for the spring fill. This variance request is shown graphically on the enclosed Attachment 6. Also enclosed are graphs depicting the projected Martin Reservoir elevations from modeling runs made both without the rule curve variance (Attachment 7) and with the variance (Attachment 8). The projections modeled in these attachments were based on actual inflows from the 2006 and 2007 time period. Use of those inflows in the model provides conservative outcome for this particular application since weather experts have not indicated that conditions should be that severe. In other words, using that flow set should result in worst case elevations with the requested variance.

Attachment 7 shows that in the absence of the variance under the inflows modeled, Martin Reservoir could be expected to reach an approximate elevation of 484 MD, which is some 5.5 feet below the normal operating summer pool elevation of 489.5 MD. As seen on Attachment 8, with the rule curve variance in place and under the flows modeled, there is a

good possibility that Martin Reservoir could gain approximately 4 additional feet by early April, which could greatly enhance Alabama Power's ability to support the many reservoir and downstream needs during next summer's critical period in the event that current forecasts materialize. It is important that we stress the conservative outcome of the modeling as a result of the use of the severe inflows modeled for this request. That, coupled with a weather forecast, should give some assurance that the reservoir can be managed effectively for both flood control and for filling.

In order to adequately evaluate the proposed rule curve variance at the Martin Project, consideration must be given to the minimum flow releases at the downstream Thurlow Project. In association with the proposed Martin temporary drought based rule curve variance, Alabama Power is hereby providing notification to the FERC under Article 401 of the Yates and Thurlow license (FERC Project No. 2407) that upon approval of the Martin variance, the minimum flow releases at the Thurlow development will be temporarily modified as follows:

1. Change will be in effect until May 1, 2011.
2. Thurlow will release a minimum of the greater of $\frac{1}{2}$ Yates inflow or 2 x Heflin Gage (Thurlow releases > 350 cfs) when downstream Alabama River flows are reduced by 10%.
3. Thurlow will release a minimum of 350 cfs when downstream Alabama River flows are reduced by 20%.
4. Thurlow release will maintain 400 cfs at Montgomery WTP if downstream Alabama River flows are reduced to 2000 dsf.

NOTE: Steps 2, 3, and 4 are consistent with ADROP implementation.

This Thurlow flow release modification is shown graphically on the enclosed Attachment 9.

Resource Agencies Participation

The ADAPT – MAG is led by the State of Alabama's Office of Water Resources and involves state resource agencies including the Alabama Department of Environmental Management (ADEM) and the Alabama Department of Conservation and Natural Resources (ADCNR). In addition, the USACE, as a reservoir operator in the state of Alabama, also participates on the MAG. During drought conditions, these meetings are scheduled regularly. Through this forum, Alabama Power updates resource agencies on current operations and conditions as well as any proposed operations.

Alabama Power is providing the USFWS, ADCNR, and the ADEM with this package of information, requesting concurrence, describing the Martin drought-based rule curve

variance and the Thurlow temporary flow modifications by email , concurrent with the filing of this package with FERC. The USACE will be provided the package for information purposes by email as well.

ADROP is an adaptive process that involves appropriate resource agencies early in the process. Part of that process includes regularly scheduled conference calls with appropriate resource agencies. These agency calls began on October 27, 2010 in Mobile, and involved ADEM, ADCNR, U.S. Fish and Wildlife Service (FWS), OWR, as well as the USACE. The second of these agency calls was conducted on November 16, 2010 and involved ADCNR, FWS, OWR, as well as the USACE. On this call, we discussed the request made on November 9, 2010 to the USACE for rule curve variances at Weiss, Logan Martin, and Harris, as well as plans for filing a rule cure variance at Martin with FERC. Attachment 10 provides a timeline of events associated with this issue to date.

Alabama Power will continue to communicate with these appropriate resource agencies regularly to discuss hydrologic conditions and to provide any additional information they request associated with APC actions.

Given the fact that implementation of the Martin drought-based rule curve variance needs to be initiated by January 1, 2011, in order to maximize its effect on our drought mitigation efforts, Alabama Power respectfully requests timely handling of this proposal.

Attachments

FERC P-349

Temporary Drought-based Rule Curve
Variance Request

November 2010

U.S. Drought Monitor

Alabama

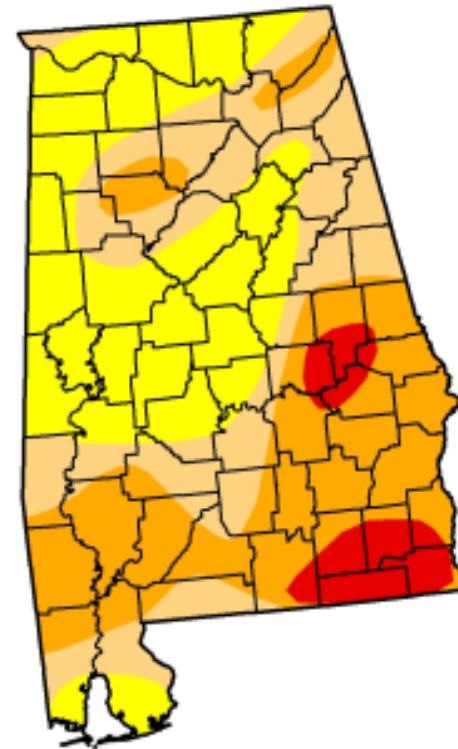
November 23, 2010
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.0	100.0	64.2	36.3	6.3	0.0
Last Week (11/16/2010 map)	0.0	100.0	66.0	33.8	11.6	0.0
3 Months Ago (08/31/2010 map)	47.6	52.4	17.6	0.0	0.0	0.0
Start of Calendar Year (01/05/2010 map)	100.0	0.0	0.0	0.0	0.0	0.0
Start of Water Year (10/05/2010 map)	3.7	96.3	66.3	25.7	4.4	0.0
One Year Ago (11/24/2009 map)	100.0	0.0	0.0	0.0	0.0	0.0

Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements

<http://drought.unl.edu/dm>



Released Wednesday, November 24, 2010

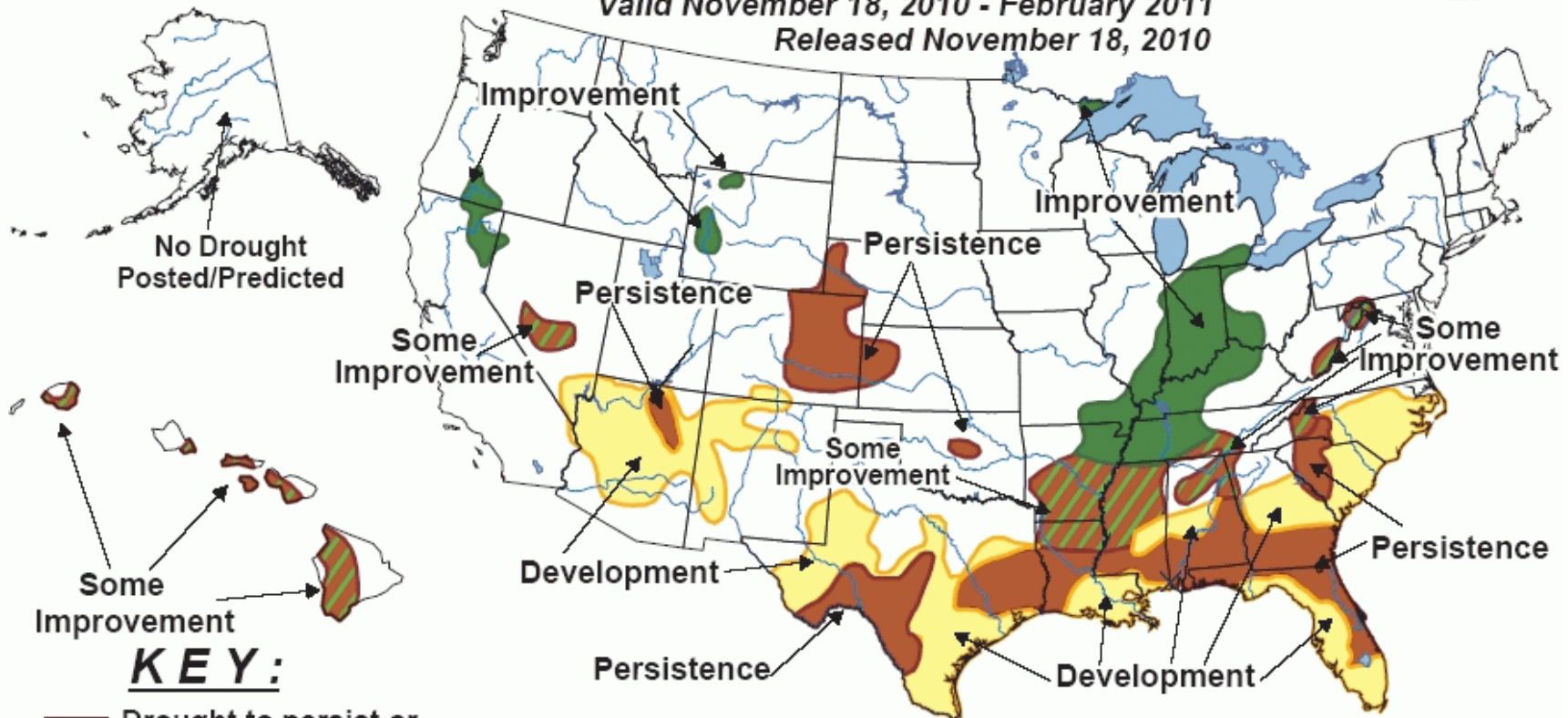
Author: M. Brewer, NOAA/NCDC



U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid November 18, 2010 - February 2011
Released November 18, 2010

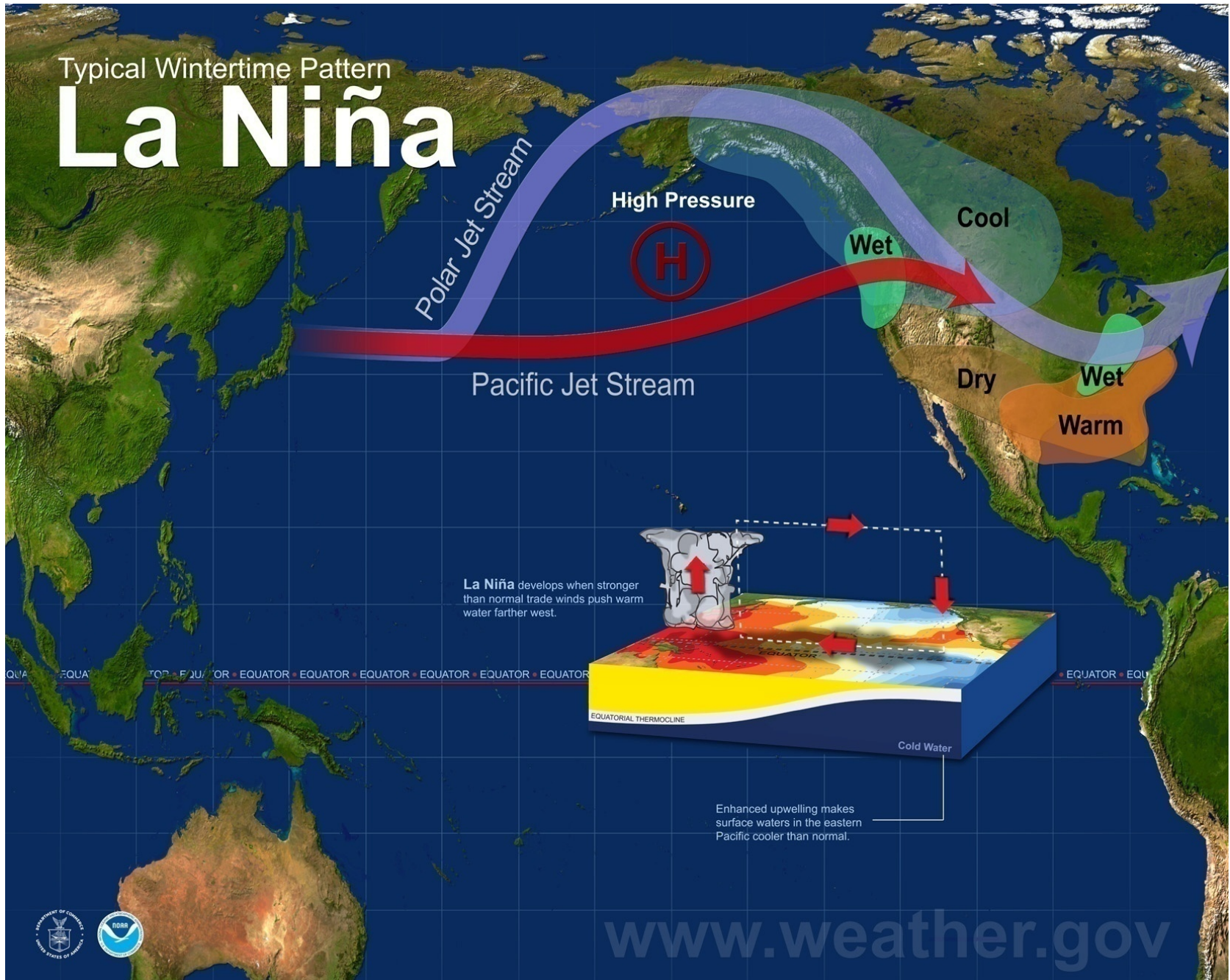


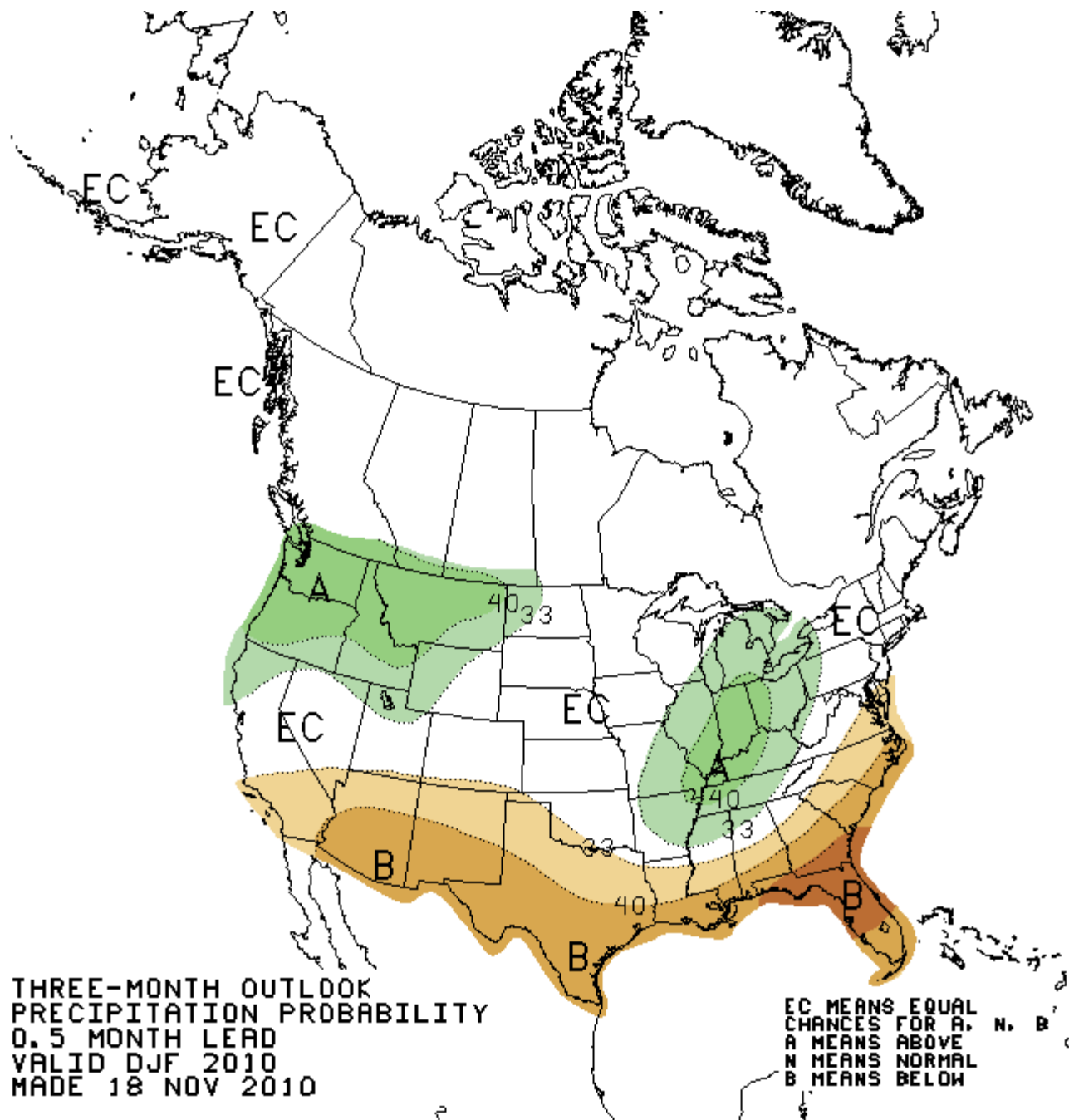
- KEY:**
- Drought to persist or intensify
 - Drought ongoing, some improvement
 - Drought likely to improve, impacts ease
 - Drought development likely

Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Short-term events -- such as individual storms -- cannot be accurately forecast more than a few days in advance. Use caution for applications -- such as crops -- that can be affected by such events. "Ongoing" drought areas are approximated from the Drought Monitor (D1 to D4 intensity). For weekly drought updates, see the latest U.S. Drought Monitor. NOTE: the green improvement areas imply at least a 1-category improvement in the Drought Monitor intensity levels, but do not necessarily imply drought elimination.

Typical Wintertime Pattern

La Niña





Alabama's dry conditions could linger for 2 years

By Markeshia Ricks • November 11, 2010

Alabama's top climate expert said the state should brace itself for dry weather conditions that could linger for the next two years.

State Climatologist John Christie told a subcommittee of the Alabama Drought Assessment and Planning Team on Wednesday that the climate phenomenon known as La Niña could mean that the state is headed for multiple years of dry conditions.

Much of the state is currently under a drought watch or warning, and the members of the state's drought team will ask the U.S. Drought Monitor to expand the area for where drought likely will persist or intensify to include a greater portion of east Alabama and west Georgia. The updated map, which provides information on drought conditions throughout the country, is expected to be released today.

Christie said La Niña could make the drought-like conditions that the state already is experiencing, particularly in central and south Alabama, linger.

"It's a grim prospect for water resources no doubt," he said.

Unlike the El Niño, La Niña is characterized by cooler than normal temperatures in the Pacific Ocean, which will mean a warmer and drier winter and spring for the Southeast.

Christie said Alabama recorded "the wettest fall in Alabama" in 2009, which broke the multi-year drought that had gripped the state since 2006. But in 2010, much of the state slipped back into below normal rainfall again.

Joel Lanier, senior service hydrologist with the National Weather Service in Tallahassee, Fla., said the southeast corner of Alabama is "pretty dry" and it has forced farmers to delay their winter planting.

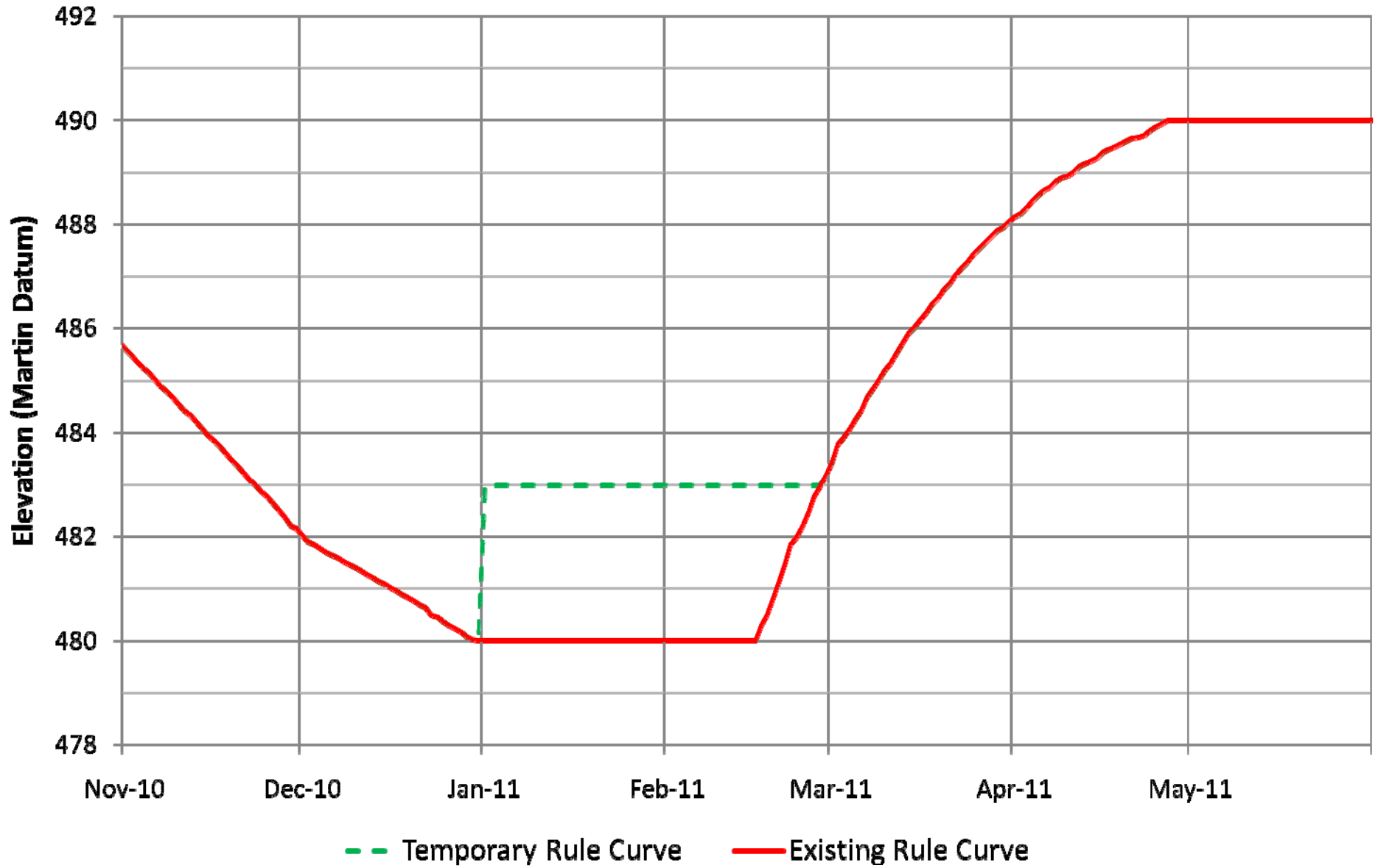
While some rain is expected to possibly roll into the Montgomery area as early as this Sunday, experts said it's not going to be enough to make up what the state needs to be at normal stages for this time of the year.

Brian Atkins, director of the Alabama Office of Water Resources, said he wasn't expecting to hear that the dry conditions that the state has been experiencing could be here to stay for a while. But he said it's a good warning, giving those in the state who depend on rainfall a chance to prepare.

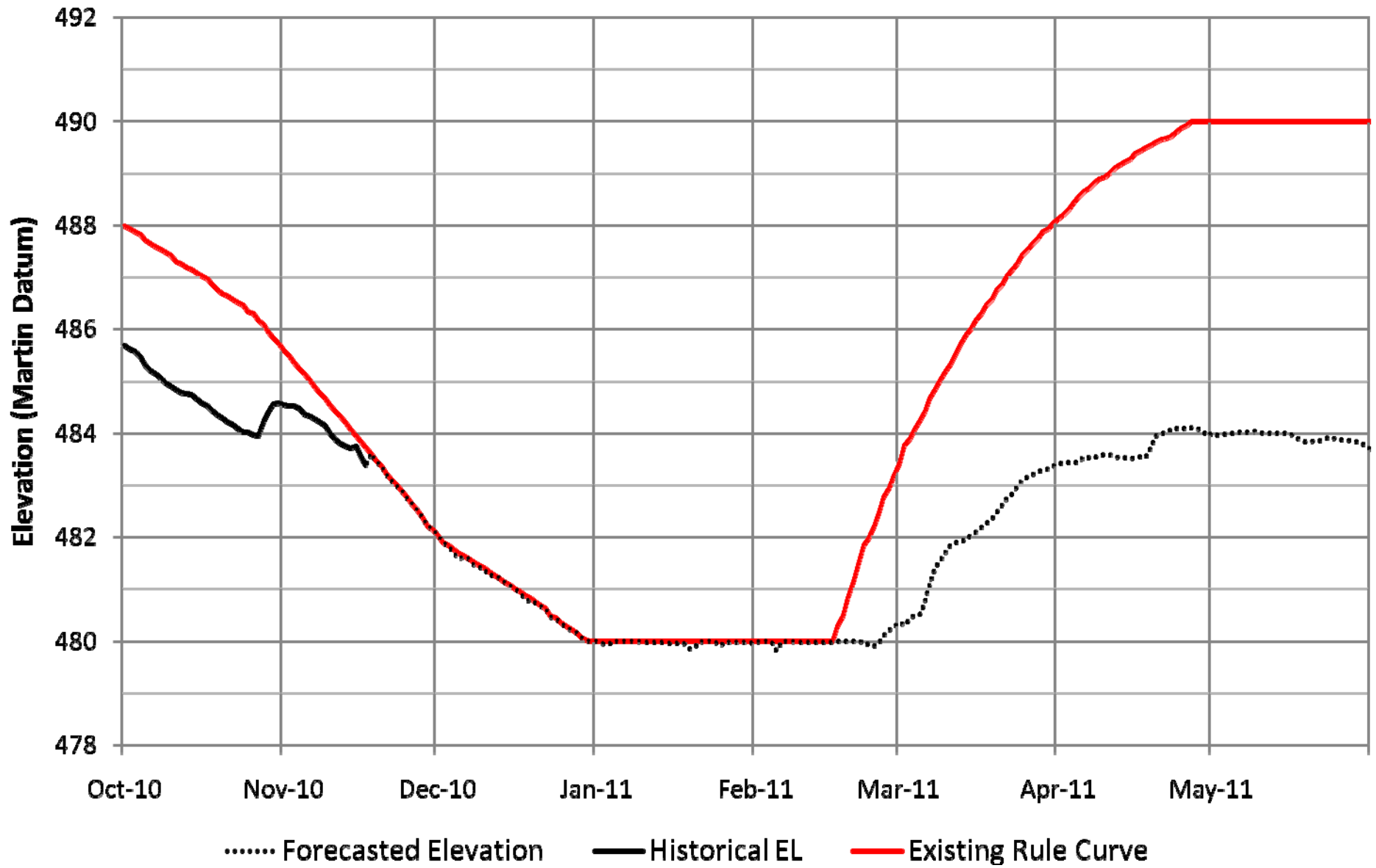
Related Articles

[Caution urged as state's fall fire season heats up](#)

Martin Project Proposed Drought Based Temporary Variance

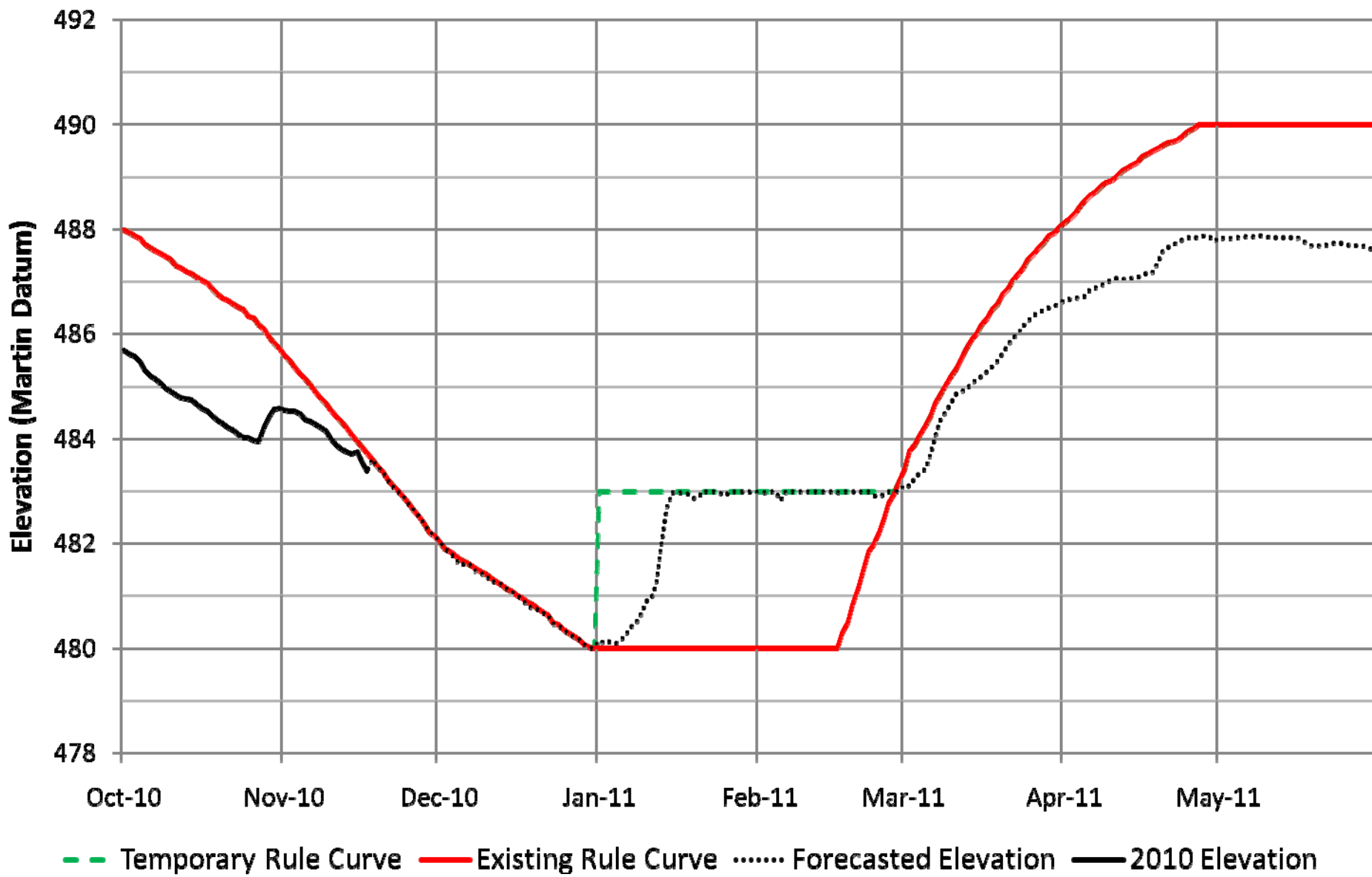


Martin Project
Without Proposed Drought Based Temporary Variance



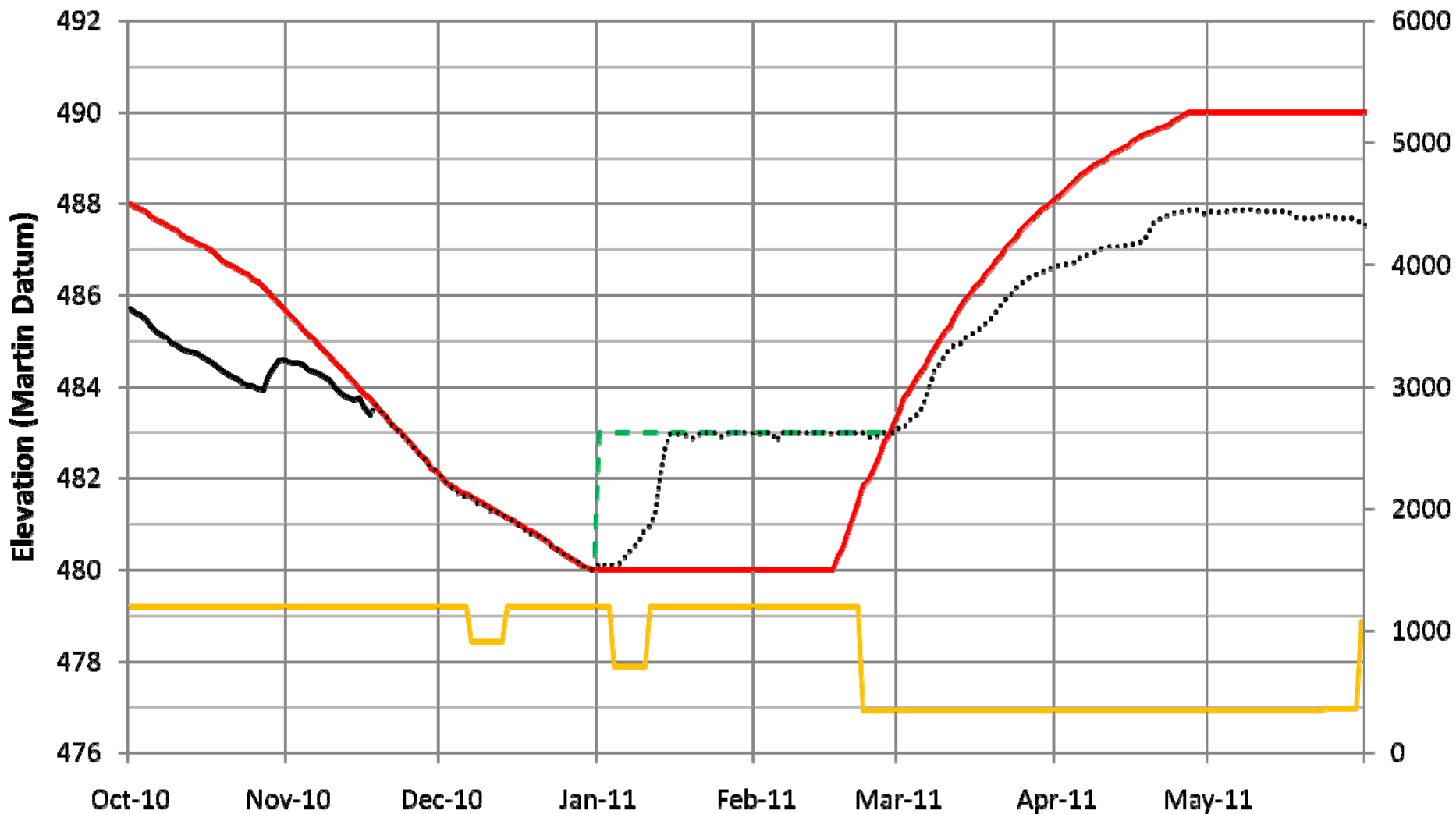
Martin Project

With Proposed Drought Based Temporary Variance



Martin Project

With Proposed Drought Based Temporary Variance



--- Temporary Rule Curve

— Existing Rule Curve

..... Forecasted Elevation

— 2010 Elevation

— Thurlow Minimum Discharge

Attachment 9

Timeline of Events

Date	Event
10/18	Internal Meeting Discuss Need for 10% Flow Reduction
10/21	Initial State Drought Meeting – Drought Declarations Recommended by MAG
10/27	Initial Agency Meeting (Mobile, AL) – Officially Discussed 10% Reduction
10/29	APC Letter to Corps for 10% Reduction
11/8	10% Flow Reduction Approved by Corps
11/9	APC Requests Temporary Drought-Based Variances for Weiss (3 ft), Logan (2 ft) and Harris (2 ft)
11/10	State Drought Meeting - MAG
11/15	Internal Meeting Discuss Martin Variance
11/15	Requested Temporary Flood-based Variances for Weiss (3 ft), Logan (2 ft) and Harris (2 ft) for Rain Event (bridge until 11/9 Variance Approval)
11/15	Corps denies 11/15 request as filed, but instead approves 0.5' variance at each of the three projects for 2 weeks.
11/16	2 nd Agency Conference Call – Discussed Rule Curve Variances at Weiss, Logan Martin, Harris, and Martin
Today	Preparing FERC filing for Martin (01/11 implementation?)