



# County of Santa Barbara Planning and Development

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To: Board of Directors  
Santa Barbara County Water Agency

From: Dianne Black, Director *Dianne M. Black*  
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Staff Contact: Dennis Gibbs, Senior Hydrologist

Date: August 25, 2010

Re: **CEQA Determination for the Santa Barbara County/Twitchell Reservoir  
Cloud Seeding Program:** Addendum to previous Negative Declaration (00-ND-  
29).

CEQA Guidelines Section 15164 allows an addendum to be prepared when only minor technical changes are proposed in the project or changes which would not create new significant impacts. Negative Declaration 00-ND-29 was prepared in November 2000 for the 2000-2001 Santa Barbara County and Twitchell Reservoir Cloudseeding Program. This 15164 letter hereby amends 00-ND-29 for the proposed 2010-2011 Santa Barbara County/ Twitchell Reservoir Cloud Seeding Program.

Location: The Santa Barbara County portion of the cloud seeding program is located along the Santa Ynez River watershed, upstream of Lake Cachuma reservoir. The Twitchell Reservoir portion of the cloud seeding program is located along the border of Santa Barbara and San Luis Obispo counties in the Twitchell Reservoir watershed.

Physical structures involved in the project are stationary land-based generators used to disperse silver iodide into the atmosphere. These generators are proposed to be located along ridgelines surrounding the Twitchell Reservoir and Santa Ynez River watersheds.

## BACKGROUND:

The Santa Barbara County Water Agency proposes to continue the cloud seeding program that has been conducted in Santa Barbara County since 1981 (excluding 1985-86 and 2007-2008). In 1992, the program was expanded to include the Twitchell Reservoir watershed. Runoff water accumulated in Twitchell Reservoir is periodically released to recharge the Santa Maria

Groundwater Basin. Impacts of the cloud seeding program are described in Negative Declaration 00-ND-029 as finalized on November 3, 2000.

## **PROJECT DESCRIPTION:**

The project description has been modified to include the specific 2010-2011 "Suspension Criteria" proposed by the County Water Agency to protect the South Coast Burned areas, including the Gap, Tea Fire and Jesusita areas, to protect the Santa Ynez River Watershed, which has not yet recovered from the Zaca Fire and to protect the Santa Ynez River and the Cuyama River from excessive flows due to seeding operations during the upcoming winter season. *Suspension criteria are subject to revision when deemed necessary by the Santa Barbara County Water Agency (Agency) and Santa Barbara County Flood Control District (District).* The proposed suspension criteria are presented below:

### **2010-2011 CLOUD SEEDING SUSPENSION CRITERIA**

#### **A. General Criteria for the Entire Project Area in both Santa Barbara and San Luis Obispo Counties**

*Criteria in this category apply to the entire project area including all of Santa Barbara County and the Twitchell Reservoir Drainage of Southern San Luis Obispo County.*

1. Whenever the National Weather Service (NWS) issues a severe storm, precipitation, or flood warning that affects any part of the project area, the project meteorologist shall suspend operations which may affect that part. Operations will be suspended at least for the period that the warning is in effect.
2. The Project Meteorologist or District/Agency personnel shall retain independent authority to suspend cloudseeding operations for any part, or all of the project area in the event that unforeseen conditions develop during storm events which in their best judgment have the potential to cause flooding or other adverse conditions anywhere within the project area.

#### **B. Specific Criteria for Individual Areas/Watersheds**

##### **South Coastal Burned Areas Including the Gap, Tea and Jesusita Fire Areas:**

1. No targeting of or seeding operations which affect the South Coast of Santa Barbara County south of the Santa Ynez Mountains Ridgeline will be conducted.

2. Ground seeding sites along the Santa Ynez Mountains Ridgeline *near* the Gap Fire Area; West Camino Cielo and Rancho del Cielo (Refugio Pass) will only be activated under southeast to west wind directions to ensure no effects of seeding reach the South Coastal Areas. This is standard operating procedure since the recently burned areas, urban corridors, and watersheds that drain into them are never targeted. When the wind direction at the 850mb (millibars) level, usually around 4,000 feet above mean sea level exceeds 270<sup>0</sup> seeding would be suspended from these sites. Wind directions at this level are provided at approximately six minute intervals during storm periods from the NWS Vandenberg NEXRAD VAD radar displays. The sole ground seeding site *near* the Jesusita and Tea Fire Areas, Gibraltar Road, will only be utilized under southeast to west-southwest wind directions. When the wind direction at the 850mb (millibars) level, usually around 4,000 feet above mean sea level exceeds 260<sup>0</sup> seeding would be suspended from this site. This is also standard operating procedure.

**Santa Ynez River Watershed including the Zaca Fire Area:**

1. Due to the ongoing recovery of the Zaca Fire area, high intensity storms will not be seeded that would impact recovering areas since high intensity events may cause accelerated sediment flux. If the NWS predicts 0.8" per hour or greater rainfall intensity, seeding will not be conducted in project areas where such intensities are predicted. If 0.8" per hour intensities are observed anywhere in the Santa Ynez River Watershed, seeding activities shall be immediately suspended for the remainder of that storm event.
2. Prior to and during each storm event the District will make stream flow runoff forecasts for the Santa Ynez River using a hydrologic computer model, Alert telemetered rainfall data, radar, and quantitative precipitation forecasts. If, prior to any storm event the model indicates that the storm has the potential to generate a 15,000 cubic feet per second (cfs) or greater flow in the Santa Ynez River near Lompoc, the storm may be seeded *only* if; (1) both the District/Agency and Project meteorologist concur, and (2) measures are taken to continuously monitor the storm event. If stream flow runoff forecasts predict flows of over 15,000 cfs in the Santa Ynez River near Lompoc based on **observed** rainfall data, seeding operations which may impact the Santa Ynez River flow below Bradbury Dam shall be immediately suspended.
3. Should it be predicted that Lake Cachuma entirely fill and/or spill based on the Flood Control's Santa Ynez River computer flow model, seeding operations to target the Santa Ynez Watershed will be suspended for the remainder of the season.

**The La Brea Fire Area:**

1. The La Brea Fire Area is not a targeted area of the cloudseeding program. However, due to ongoing recovery and the fact that this area is *adjacent* to the Twitchell Reservoir target, if the NWS predicts 0.8" per hour or greater rainfall intensity for the La Brea Fire Area, seeding would not be conducted in the adjacent project area (Huasna and Alamo drainages). If 0.8" per hour intensities are observed in the Twitchell target area, seeding activities shall be immediately suspended for the remainder of that storm event.

**Twitchell Reservoir and the Cuyama River Watershed:**

1. Cloud seeding operations shall be suspended in the Twitchell Watershed when 30,000 Acre Feet of storage remain in the conservation pool of Twitchell Reservoir (elevation 608.75') prior to March 1, 2010. The conservation pool is full at elevation 622.30' (108,758 acre-feet of storage). This leaves 119,000 AF of Flood Control capacity. After March 1, 2010 seeding operations shall only be suspended if the entire conservation pool is filled leaving 89,000 AF of flood storage in the Reservoir.
2. Seeding operations shall be suspended if the current or projected flow on the Cuyama River is 15,000 cfs or greater, as determined by the District/Agency.
3. Seeding operations shall be suspended if the NWS or NOAA predicts a storm of 6" or greater over any 24-hour period to occur in any location within the Sisquoc Watershed. The Sisquoc River has no control facilities on it and significant flows emanating from it can affect the Santa Maria River levee.

***Note: All suspension criteria are subject to revision should hydrologic conditions warrant it. All revisions must be documented in writing and be approved by District/Agency representatives with notification provided to the project meteorologist.***

**CHANGES IN PROJECT IMPACTS:**

The proposed modifications in project description are intended to minimize the potential for cloud seeding activities to contribute to potential flood hazards along the Santa Ynez and Cuyama rivers. These modifications would restrict cloud seeding operations to a level of activity equal to or less than has occurred in the past. Potential impacts of the revised cloud seeding program would be no greater than those disclosed in the previous environmental document, 00-ND-29, based on the added restrictions. Therefore, no new impacts would be anticipated due to the proposed modification of the project.

## **FINDINGS:**

It is the finding of the Planning and Development Department that the previous environmental document as herein amended may be used to fulfill the environmental review requirements of the current project. Because the current project meets the conditions for the application of State CEQA Guidelines Section 15164, preparation of a new EIR or ND is not required.

Discretionary action by the Board of Directors of the Santa Barbara County Water Agency on the proposed 2010-2011 Santa Barbara County/Twitchell Reservoir Cloud Seeding Program may now proceed with the understanding that any substantial changes in the proposal may be subject to further environmental review.