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The Resources Agency
Department of Water Resources
Division of Safety of Dams

2006-09 Seismic Reevaluation Program (First Screen)

Pardee Dam No. 31-4

Amador County

July 5, 2006

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Introduction

The purpose of this review is to quickly identify dams that do not require further in-house review of seismic safety, because of no permanent storage, low seismicity, or low hazard. Pardee Dam is a concrete gravity dam that is 345 feet high and is located in Amador County. It impounds up to 197,950 acre-feet and was constructed in 1929.

Background

The 2006-09 Seismic Reevaluation Program is an in-house study by Division staff to identify dams of uncertain seismic stability. All jurisdictional dams are first screened by the Design Engineering Branch to eliminate embankment dams (except hydraulic fills) and concrete gravity dams of low hazard (TCW < 8) and low seismicity (PGA < 0.2g), as well as dry dams (no permanent storage). About one-third of the jurisdictional dams, including this dam, meet the exclusion criteria and are not forwarded for the second screening process. The dams forwarded to the Field Engineering Branch will be screened based upon the schedules in Tables 1 and 2.

Table 1 - Schedule for Second Screen of Embankment and Concrete Gravity Dams

| Year | Hazard Threshold | Seismicity Threshold |
|------|------------------|----------------------|
| 2006 | 24 | 0.6 g |
| 2007 | 16 | 0.4 g |
| 2008 | 8 | 0.4 g |
| 2009 | 8 | 0.2 g |

Table 2 - Schedule for Second Screen of Hydraulic Fill and Concrete Arch Dams

| Year | Hazard Threshold | Seismicity Threshold |
|------|--------------------|----------------------|
| 2006 | 24 | 0.4 g |
| 2007 | 12 | 0.2 g |
| 2008 | All remaining dams | |

The hazard threshold corresponds to the total class weight (TCW). Thus dams with TCW greater than or equal to 24 that also meet the seismicity threshold are scheduled to be

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screened in 2006. The seismicity threshold corresponds to the October 2003 Revision of the 2002 USGS National Seismic Hazard Map peak ground acceleration (PGA) with 2 percent probability of exceedance in 50 years (2475-year return period). Thus Table 1 dams with PGA greater than or equal to 0.6 g that also meet the hazard threshold are scheduled to be screened in 2006.

Finding

This dam was excluded from further review because the peak ground acceleration calculated from the USGS National Seismic Hazard Map for 2 percent probability of exceedance in 50 years is less than 0.20 g.

Discussion

The screening parameters for this dam were TYPE = GRAV, STORAGE = permanent, PGA = 0.16, and TCW = 28.

07/05/2006:dwsmith