2107
OROVILLE DAM
SPILLWAY
EVACUATION

PRESENTED BY
SHERRIFF KORY HONEA
CALIFORNIA STATE WATER PROJECT

- OROVILLE DAM – LAKE
- OROVILLE KEY TO THE STATE WATER PROJECT (SWP)
- SWP ONE OF THE LARGEST WATER & POWER UTILITIES IN THE WORLD
- SUPPLIES 23 MILLION PEOPLE WITH DRINKING WATER
OROVILLE DAM COMPLEX
TALLEST DAM IN THE UNITED STATES – 770 FT.
SECOND LARGEST MAN-MADE LAKE IN CA
WATER CRESTS EMERGENCY SPILLWAY WHEN LAKE LEVEL IS 900 FT.
EMERGENCY SPILLWAY - 1730 FT. LONG – 30 FT. HIGH
FEBRUARY 7, 2017

...NOTHING TO SEE HERE

• RECEIVED CALL FROM LOCAL MEDIA ASKING IF THERE WAS A PROBLEM AT THE DAM

• DIFFICULTY GETTING INFO FROM DWR

• ULTIMATELY LEARNED OF GAPPING HOLE

• RECOGNIZED THERE WAS A THREAT TO PUBLIC SAFETY, BUT NOT SURE HOW THE THREAT WOULD MANIFEST ITSELF
“THE HOLE”

- 200 FT. LONG
- 30 FT. DEEP
- HEAD-CUTTING
  20 FT. BACK
BALANCING COMPETING INTERESTS & MANAGING RISK WITHOUT A PLAYBOOK

• HISTORIC RAINFALL & SNOW PACK FOLLOWING FIVE YEARS OF DROUGHT
  • RAINIEST YEAR IN 122 YEARS OF KEEPING RECORDS

• DWR WAS TRYING TO MANAGE THE INFLOW THROUGH RELEASES FROM THE SPILLWAY & THE HYATT POWER PLANT
  • TRYING TO FIND THE “SWEET SPOT” – 40,000 TO 60,000 CFS
    • SHOOTING WATER PAST THE HOLE, WITHOUT CAUSING FURTHER DAMAGE TO LOWER INFRASTRUCTURE
  • HYATT POWER PLANT NOT AT FULL CAPACITY
    • NOT ALL TURBINES FUNCTIONING
FEBRUARY 11, 2017
HERE WE GO...

- Lake level reaches 900 ft.
- Water crests emergency spillway
- First time in history of Oroville Dam
- Conflicting messages
- DWR - “Not ideal, but should be okay”
THIS ISN’T GOOD….DOES THE SHERIFF KNOW ABOUT THIS?

- EROSION – HEAD-CUTTING
- FACING CATASTROPHIC FAILURE OF EMERGENCY SPILLWAY
- UNCONTROLLED RELEASE OF MILLIONS OF GALLONS OF WATER
- 30 FT. HIGH WALL OF WATER, 1730 FT. LONG
- POURING OUT UNTIL TOP 30 FT. OF LAKE IS DRAINED
FEBRUARY 12, 2017
PULLING THE BIG RED HANDLE.....

Evacuate
• EVACUATE THE SOUTHERN PART OF BUTTE COUNTY

Evacuate
• EVACUATE BCSO DISPATCH CENTER

Evacuate
• EVACUATE THE BUTTE COUNTY JAIL

Call
• CALL EVERYONE FOR HELP
CROYLE’S FIGHT TO AVERT DISASTER

- Emergency Spillway
- FOC – 100,000 CFS
- Bags of Rock
- Hyatt Power House
- 1.6 Million Cubic Acres of Debris Ended Up in the Tail Race
- Hyatt Power House Began to Flood
- Could Have Been a Catastrophe
THE DISASTER THAT ALMOST HAPPENED
RECOVERY CONTINUES
COULD THIS HAPPEN AGAIN?

• 1000'S OF DAMS ACROSS THE COUNTRY
• DETERIORATING INFRASTRUCTURE IS VULNERABLE
• CRITICAL ENERGY INFRASTRUCTURE – TARGETS
FORENSIC TEAM FINDINGS

• PHYSICAL INSPECTIONS ARE NOT ADEQUATE TO DETECT DESIGN AND CONSTRUCTION FLAWS
• PERIODIC, COMPREHENSIVE REVIEW OF DESIGN AND CONSTRUCTION DOCUMENTS, TAKING INTO ACCOUNT CURRENT OPERATIONS OF THE DAM ARE NEEDED TO DETERMINE RISKS
• MERE COMPLIANCE WITH EXISTING REGULATIONS IS NOT SUFFICIENT TO MANAGE RISK TO THE PUBLIC
• FINDINGS PROBABLY APPLY TO ALL DAMS IN CALIFORNIA – MORE THAN 1400
THANK YOU

QUESTIONS OR COMMENTS