

Case Study Name: WEST SALT CREEK LANDSLIDE		Key Terms: • SOIL CREEP.	
Section of the Specification: LAND MASS MOVEMENT (GEOPHYSICAL HAZARDS)			
Location: Town/City/Region: WEST SALT CREEK. (WESTERN COLORADO (RURAL))		Country: USA ^{HIC}	Continent: NORTH AMERICA.
Key Information:		Causes/Theory:	
What? Rockslide / Rock AVALANCHE	When? 2014 MAY 25 th	AS THE ROCK MASS (SHALE/MARLSTONE/OIL SHALE) ROTATED, THE HEAVED AND OVERSTANDING FRONT DISAGGREGATED ALMOST INSTANTANEOUSLY AND THE PULVERIZED ROCK MASS FLOWED IN DISCRETE ROCK AVALANCHE SURGES DOWN VALLEY. IT COVERED NEARLY ONE SQUARE MILE.	
Why? HEAVY RAINFALL ELEVATION // PULVERIZED ROCK MASS.	Facts and Figures: 880M WIDE AND 280M DEEP BLOCK FLOWED FOR 4.5 KM DOWN VALLEY. TOP ELEVATION 2895m - 640m. CREEP RATES = 1.5-6 INCHES PER YEAR.	THE DEBRIS FIELD WAS DRY. NO WATER OR MUD SAVED OR FANNED OUT FROM THE STEEPLY SLOPED (<40°) EDGE OF THE AVALANCHE TOE.	
Effects:		Solutions:	
Political	Economic • MAY CAUSE PROBLEMS FOR OIL + GAS WELLS WITHIN THE REGION	What has/could be done? By whom? • GEOLOGISTS INSTALLED MONITORING EQUIPMENT. • CONDUCTED EMERGENCY HAZARD ASSESSMENT. • BARE EARTH MODELS. • EVALUATION OF OIL + GAS WELL PADS IN THE VICINITY • SEISMIC MONITORING. • COMPACT SOIL // CONTROL	Are they Sustainable? Why/Why not? • MOST EFFECTIVE AS IT GIVES LIVE DATA. ALSO, ABLE TO PAIR WITH EARLY WARNING SYSTEM. • HISTORICAL DATA // TRACKING.
Environmental • IRRIGATION DITCH WAS BLOCKED. • LARGE DEPRESSION BELOW THE HEADSCARP. • MAY CAUSE MUD FLOWS/DEBRIS • SLUMP BLOCK REMAINS A THREAT.	Social • 3 DEATHS • ROTATION OF THE SLUMP BLOCK DAMMED THE UPPER PART OF THE WEST SALT CREEK, DACKING UP ABOUT 120 million GALLONS OF WATER, THREATENING LOCAL COMMUNITIES // FLOODING.	WATER FLOW.	
Possible Exam Question: EXAMINE PRE-EVENT MANAGEMENT STRATEGIES DESIGNED TO REDUCE HUMAN VULNERABILITY TO MASS MOVEMENT HAZARDS (NOV 2019). (10)			