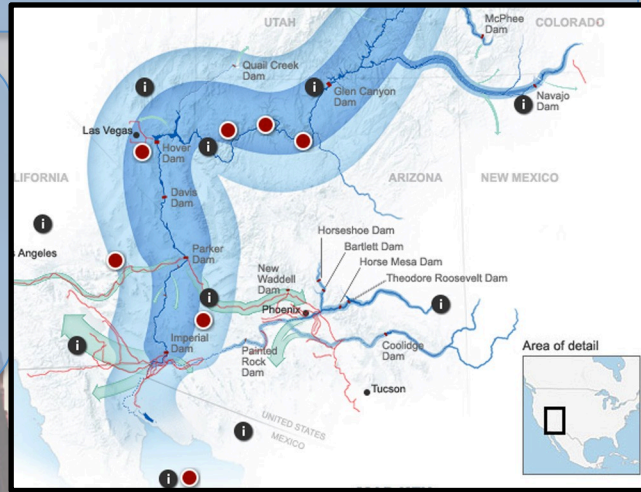


The Western Desert's Water Crisis.

UNTIL NOW CITIES IN THE WESTERN DESERT HAVE PROSPERED THANKS TO MASSIVE WATER TRANSFERS. VAST VOLUMES OF WATER HAVE BEEN TRANSFERRED FROM THE RIVER COLORADO, BUT THERE ARE LIMITS TO WHAT CAN BE ACHIEVED. FURTHER POPULATION GROWTH MAY NOT BE POSSIBLE.

TWENTIETH CENTURY MIGRANTS COULD SEE PLENTY OF OPPORTUNITIES IN THE WESTERN DESERTS SUNNY SKIES. FARMING AND TOURISM WOULD FLOURISH IF THEY COULD TACKLE THE ISSUE OF WATER SHORTAGES. THE SOLUTION TO THIS PROBLEM WAS THE RIVER COLORADO. THE MASSIVE 2,300-KILOMETRE RIVER BRINGS MELT-WATER FROM THE ROCKIES AND WIND RIVER MOUNTAINS ACROSS THE USA AND DOWN TO MEXICO.



THE SNOWMELT BRINGS HUGE VOLUMES OF WATER IN THE SUMMER; THE COLORADO HAS A VERY LOW FLOW BETWEEN SEPTEMBER AND APRIL. IN THE MOST EXTREME YEARS OF THE EARLY 1900S, THE COLORADO'S DISCHARGE WAS 13 TIMES HIGHER IN THE MID-SUMMER COMPARED WITH WINTER.

IN TOTAL MORE THAN 1.4 MILLION ACRES OF IRRIGATED LAND PRODUCES ABOUT 15% OF THE USA'S CROPS

COLORADO'S AQUEDUCTS BRING WATER TO FARMS GROWING FRUITS AND VEGETABLES.

ECONOMIC BENEFITS OF WATER TRANSFER TO WESTERN DESERT

IN TOTAL MORE THAN 1.4 MILLION ACRES OF IRRIGATED LAND PRODUCES ABOUT 13% OF THE USA'S LIVESTOCK

COLORADO'S GIANT RESERVOIRS BRING WATER TO CITIES THROUGHOUT THE WESTERN DESERT AREA SUCH AS PHOENIX

SANDBANKS ALONG THE SIDES OF THE RIVER IN ITS LOWER COURSE HAVE BEEN STARVED OF SEDIMENT AND ARE SMALLER

PLANTS AND ANIMALS THAT LIVE ON THE SANDBANKS SUCH AS THE WILLOW FLYCATCHER HAVE DECLINED

ECOLOGICAL COSTS OF WATER TRANSFER TO WESTERN DESERT

A COOLER RIVER CHANGES THE RIVER ECOSYSTEM AND MANY SPECIES HAVE BEEN LOST

SILTS AND SANDS GET TRAPPED BEHIND BOTH DAMS. THIS MAKES THE WATER THAT LEAVES THE DAM COOLER AS SILT AND SAND HEATS UP IN THE SUNLIGHT

THERE IS A PHYSICAL LIMIT TO HOW MUCH WATER CAN BE TAKEN FROM THE COLORADO.

THERE IS A POLITICAL LIMIT TO HOW MUCH WATER CAN BE TAKEN FROM THE COLORADO. AN INTERNATIONAL AGREEMENT STATES WATER MUST BE ALLOWED TO FLOW INTO MEXICO

WHAT ARE THE ISSUES AROUND FUTURE WATER SUPPLY AND POPULATION GROWTH?

THE WATER SECURITY IS THREATENED BY CLIMATE CHANGE. THE WESTERN DESERT REGION IS PREDICTED TO WARM FASTER THAN THE WHOLE WORLD, REDUCING RAINFALL FURTHER

ALREADY 30 MILLION PEOPLE IN THE SOUTHWEST USA DEPEND ON WATER FROM THE COLORADO

PHOENIX TAKES THE MAXIMUM SHARE OF THE WATER ITS ALLOWED, BUT IT IS PREDICTED TO DOUBLE ITS POPULATION BY 2050

IN 1935, WORK BEGAN ON THE HOOVER DAM, WHICH STORES THE EQUIVALENT OF TWO YEARS RIVER FLOW IN LAKE MEAD. THE GLEN CANYON DAM WAS THEN BUILT IN 1963. TOGETHER THE TWO DAMS AND THEIR RESERVOIRS SMOOTH OUT THE COLORADO'S FLOW THROUGH THE YEAR AND REMOVE ITS FLOOD PEAKS AND BRING ADDITIONAL BENEFITS.

RESERVOIR WATER IS PIPED ALONG AQUEDUCTS, INCLUDING THE US\$4 BILLION CENTRAL ARIZONA PROJECT, WHERE REQUIRED IT FEEDS THE HOMES, FARMS AND GOLF COURSES OF THE WESTERN DESERT. THE WATER TRANSFER HAS BROUGHT MANY BENEFITS BUT ALSO COSTS.

