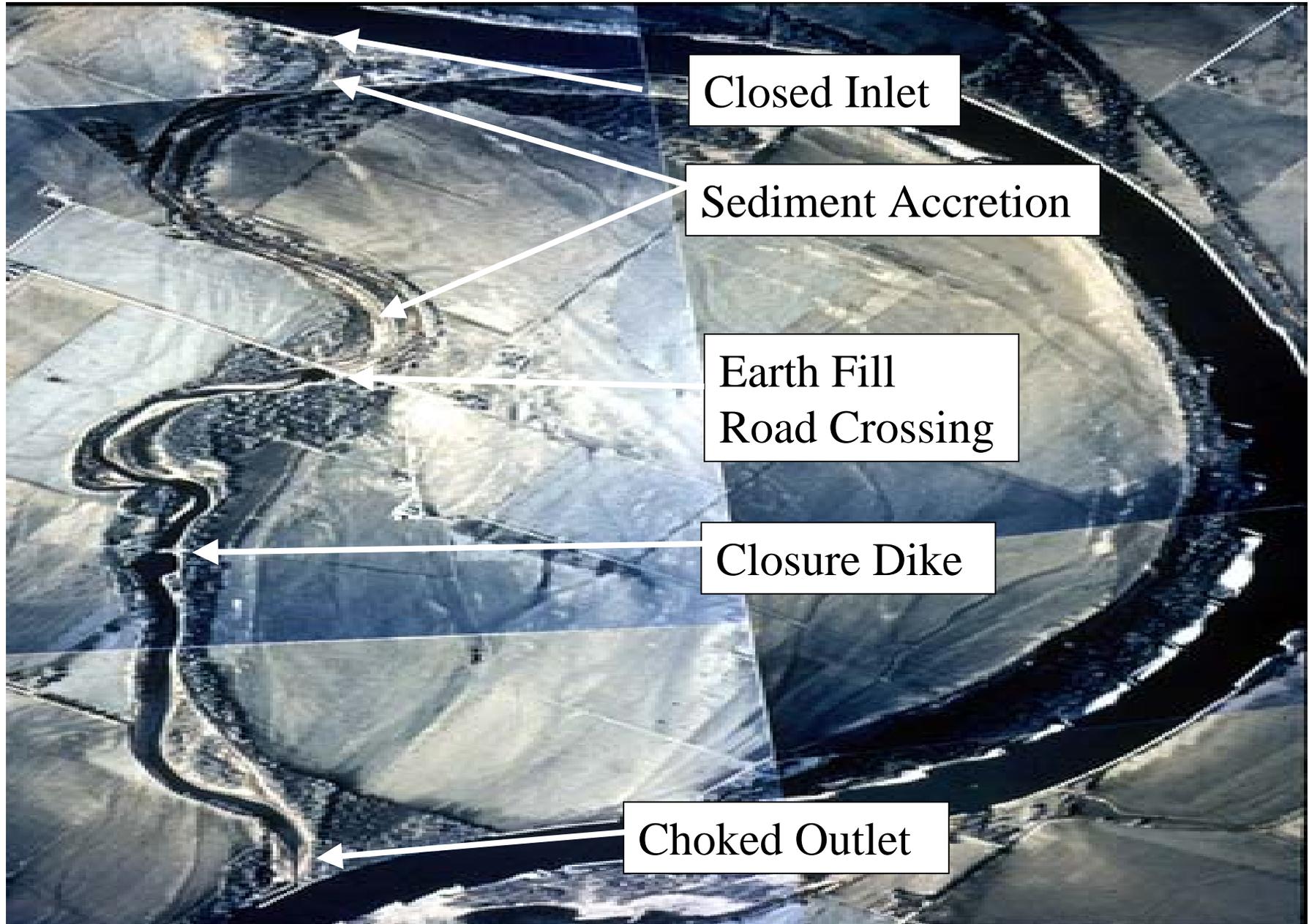


## BOYER CHUTE BEFORE RESTORATION



## BOYER CHUTE RESTORATION - SECTION 1135 PROJECT



INLET 1972

INLET CUTOFF DIKE AND CHUTE BEFORE CHUTE BECAME FILLED WITH SEDIMENT

## BOYER CHUTE RESTORATION - SECTION 1135 PROJECT



INLET 1989

INLET VIEWED FROM CUTOFF DIKE AFTER CHUTE FILLED WITH SEDIMENT, 1989

## BOYER CHUTE RESTORATION - SECTION 1135 PROJECT



INLET CULVERTS - 1989

INLET BEFORE RESTORATION, 1989, VIEWED FROM CHUTE SIDE, FILLED WITH SEDIMENT

## BOYER CHUTE RESTORATION - SECTION 1135 PROJECT



### INLET NOTCH

CONSTRUCTION OF NEW INLET NOTCH THROUGH CUTOFF DIKE, 1993.  
RIVER AT LOW WINTER LEVELS.

## BOYER CHUTE RESTORATION - SECTION 1135 PROJECT



INLET EXCAVATION  
PILOT CHANNEL EXCAVATION DOWNSTREAM FROM INLET.

## BOYER CHUTE RESTORATION - SECTION 1135 PROJECT



INLET 93

THE RESTORED CHUTE FLOWING THROUGH ITS INLET AND RE-OPENED CHANNEL. 1993

## BOYER CHUTE RESTORATION - SECTION 1135 PROJECT



UPSTREAM CHANNEL 89

UPSTREAM CHUTE FILLED WITH SEDIMENT, 1989  
NOTE BURIED FENCE POSTS, SAPLING TREES

## BOYER CHUTE RESTORATION - SECTION 1135 PROJECT



UPSTREAM CHANNEL 89

UPSTREAM CHUTE FILLED WITH SEDIMENT, 1989. NOTE WILLOWS AND SAPLING TREES.

## BOYER CHUTE RESTORATION - SECTION 1135 PROJECT

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CHANNEL EXCAVATION

UPSTREAM CHUTE EXCAVATION TO A PILOT CHANNEL. 1993

## BOYER CHUTE RESTORATION - SECTION 1135 PROJECT



UPSTREAM CHUTE AFTER RESTORATION, AT HIGH FLOWS. NOTE SNAG HABITAT DEVELOPING. 1997

## BOYER CHUTE RESTORATION - SECTION 1135 PROJECT



BRIDGE UPSTREAM 74  
CHUTE VIEWED UPSTREAM FROM ROAD CROSSING BEFORE IT BECAME  
FILLED WITH SEDIMENT, 1976

## BOYER CHUTE RESTORATION - SECTION 1135 PROJECT



BRIDGE UPSTREAM 89  
CHUTE VIEWED UPSTREAM FROM ROAD CROSSING AFTER EXTENSIVE  
SEDIMENT FILLING, 1989

## BOYER CHUTE RESTORATION - SECTION 1135 PROJECT



BRIDGE DOWNSTREAM 1989

AN ISOLATED POOL, VIEW DOWNSTREAM FROM THE ROAD CROSSING

## BOYER CHUTE RESTORATION - SECTION 1135 PROJECT



SPOIL PILES 93

EXCAVATION SPOIL PILES NEXT TO PILOT CHANNEL SLOWED CHUTE WIDENING,  
BUT WASHED AWAY GRADUALLY.

## BOYER CHUTE RESTORATION - SECTION 1135 PROJECT



BRIDGE 96

THE RESTORED CHUTE FLOWING UNDER THE NEW BRIDGE. 1996

## BOYER CHUTE RESTORATION - SECTION 1135 PROJECT



### DOWNSTREAM BACKWATER 89

PRE-RESTORATION DOWNSTREAM PORTION OF CHUTE WAS A NICE POOL OCCASIONALLY CONNECTED TO THE RIVER. BUT PONDS AND THEIR FISH ARE NOT AS RARE AS ARE CHUTES AND THEIR SPECIES. 1989

## BOYER CHUTE RESTORATION - SECTION 1135 PROJECT



OUTLET 1993

THE RESTORED OUTLET OF THE CHUTE MERGING INTO THE MISSOURI RIVER.

## BOYER CHUTE RESTORATION - SECTION 1135 PROJECT



OUTLET AERIAL 1996

THE RESTORED CHUTE'S DOWNSTREAM HALF AFTER THE 1996 FLOOD PEAK.

## BOYER CHUTE RESTORATION - SECTION 1135 PROJECT



TREE PLANTING

PLANTING OF 7,000 TREES AND SHRUBS, 1994

## BOYER CHUTE RESTORATION - SECTION 1135 PROJECT



### SNAG AND NOTCH

SPOIL BANKS WERE NOTCHED AND TREE SNAGS WERE PLACED TO FACILITATE HABITAT RESTORATION.  
BOTH WERE OF LIMITED VALUE RELATIVE TO THE NATURAL PROCESSES RESTORED.

## BOYER CHUTE RESTORATION - SECTION 1135 PROJECT



BRIDGE DEBRIS

DEBRIS CAUGHT ON UPSTREAM SIDE OF BRIDGE MIGHT HAVE BEEN LESS WITH FEWER BRIDGE PIERS

## BOYER CHUTE RESTORATION - SECTION 1135 PROJECT



### TRAIL BANK EROSION

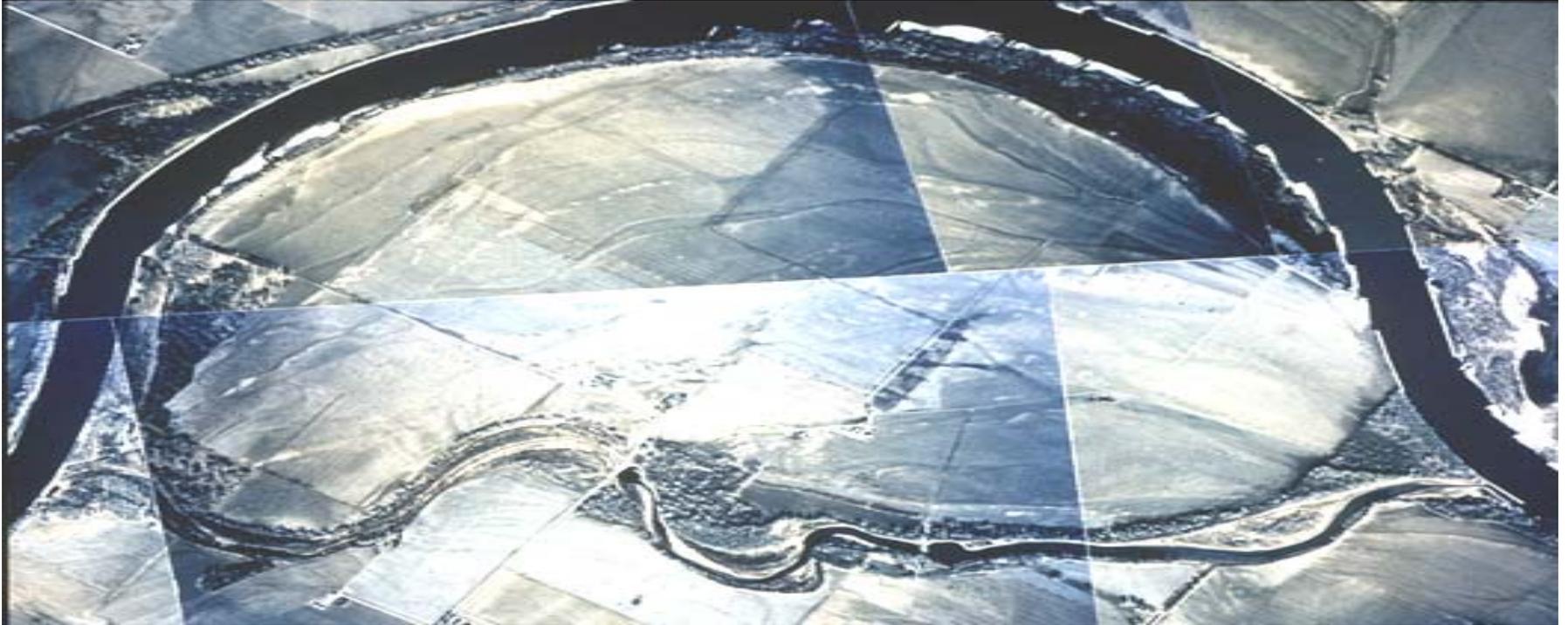
DESIRABLE CHUTE WIDENING DOWNSTREAM OF BRIDGE ERASED A NEW TRAIL BUILT BY SPONSOR. 1995. FACILITIES SHOULD BE KEPT FAR FROM DESIRED MEANDER ZONE.

## BOYER CHUTE RESTORATION - SECTION 1135 PROJECT



INLET AERIAL 96

THE RESTORED CHUTE AND ITS INLET, SHORTLY AFTER THE 1996 FLOOD PEAK



## BOYER CHUTE RESTORATION - SECTION 1135 PROJECT



BIG AERIAL 1989

PRE-RESTORATION AERIAL SHOWING CHUTE'S SEDIMENT-FILLED UPPER MILE,  
EARTH FILL ROAD CROSSING, CHUTE CLOSURE DIKE, AND SEDIMENT-CHOKED  
DOWNSTREAM END. 1989