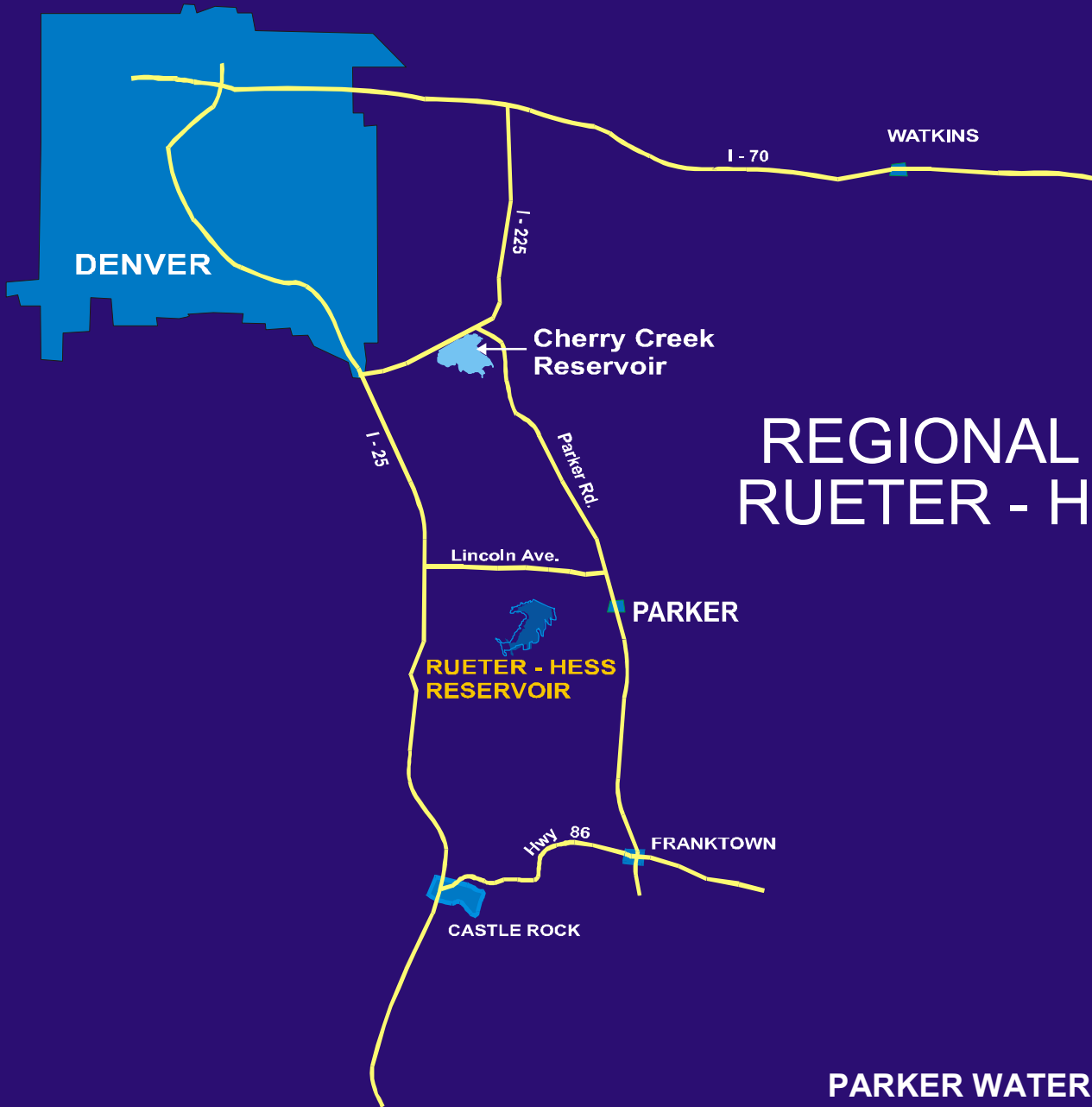


# Water Management and Rueter-Hess Reservoir



Parker Water & Sanitation District

Mark Lewis, PWSD Board President



# REGIONAL LOCATION MAP RUETER - HESS RESERVOIR

# Reservoir Development History 1985 to 1987

- 1985 District Water Supply Shortfall Identified
- 1985 Reservoir Site Options Identified
- 1985 Filed for Cherry Creek Storage Rights
- 1987 CWRPDA Study of Water Supply Options and Evaluation of Injection
- 1993 Amended Court Application to Include Rueter-Hess

# Reservoir Development History

## 1993 to Today

- 1993 Castlewood Canyon Site Rejected
- 1996 Court Decree Entered for Rueter-Hess
- 1996 First Geotechnical Studies at Rueter-Hess
- 1997 First Environmental Studies at Rueter-Hess
- 2003 Environmental Impact Study Complete
- 2004 Groundbreaking at Reservoir
- 2005 Enlargement of Reservoir

# Why the Rueter-Hess Site?



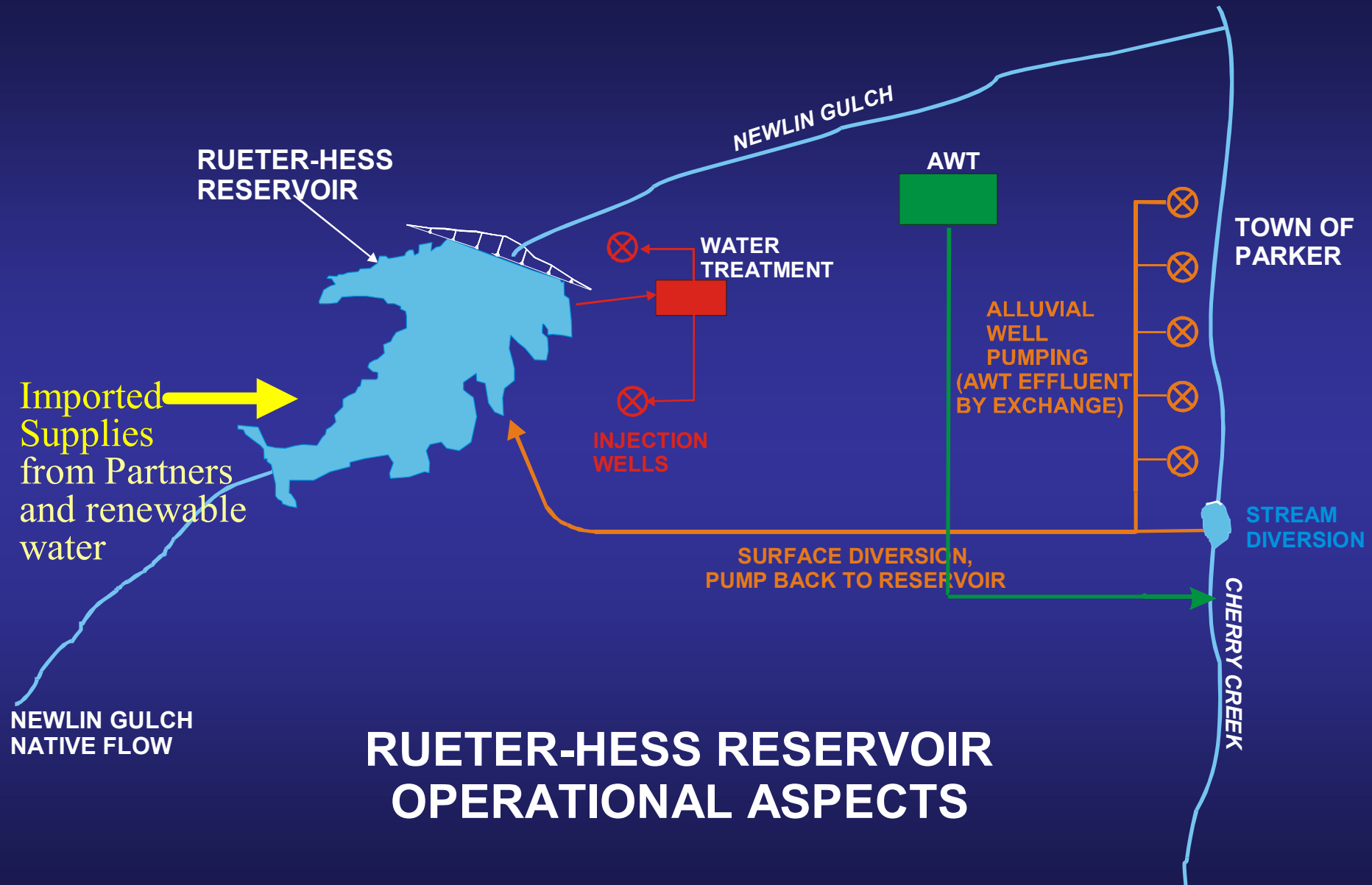
- Proximity to PWSD and Partner facilities.
- Ability to re-use AWT effluent by exchange.
- Proximity to Denver Basin well field for injection.
- Fewer permitting issues due to off-stream.
- Ability to provide regional water supply and regional recreational opportunities.

# Use of Rueter-Hess Reservoir as a Water Management Tool

- Direct use for municipal water supplies.
- Carryover storage for reliable yields in dry years.
- Ability to recapture AWT flows.
- Source for bedrock aquifer storage.

# Rueter-Hess Reservoir Water Sources

- In-priority Cherry Creek surface and ground water flows.
- In-priority flow in Newlin Gulch.
- Advanced wastewater treatment effluent pumped by exchange, using ground water return flows by PWSD and partner communities.
- Irrigation return flows.
- Pumping Denver Basin Laramie-Fox Hills aquifer wells.
- Imported water supplies (renewable water and Partners).



# RUETER-HESS RESERVOIR OPERATIONAL ASPECTS

Imported Supplies from Partners and renewable water

NEWLIN GULCH NATIVE FLOW

RUETER-HESS RESERVOIR

NEWLIN GULCH

WATER TREATMENT

INJECTION WELLS

AWT

ALLUVIAL WELL PUMPING (AWT EFFLUENT BY EXCHANGE)

SURFACE DIVERSION, PUMP BACK TO RESERVOIR

TOWN OF PARKER

STREAM DIVERSION

CHERRY CREEK

# Rueter-Hess Reservoir

## Original Reservoir

- 470 water surface acres
- 135-ft Dam Height
- 4,822-ft Dam Length
- 6 million cubic yards of dirt moved
- 18,000 cubic yards of concrete
- 4,000 tons of steel

## Enlarged Reservoir

- 1,126 water surface acres
- 196-ft Dam Height
- 7,479-ft Dam Length
- 15 million cubic yards of dirt moved
- 26,000 cubic yards of concrete
- 5,500 tons of steel

# Cherry Creek Diversion Dam









June 2006



**September 2006**



September 2006

# PWSD Future

- Participation with PWSD Partners in the enlargement of Rueter-Hess Reservoir
- Participation with PWSD Partners and South Metro Participants in acquisition of renewable water.
- Participation with PWSD Partners and South Metro Participants in construction of necessary infrastructure to transport acquired renewable water.

# Partnerships

- Size of future projects necessitate participation among several agencies.
- South Metro Group
  - Established
  - Renewed membership
  - New spirit of cooperation

# Thank You

Cherry Creek Diversion Dam



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