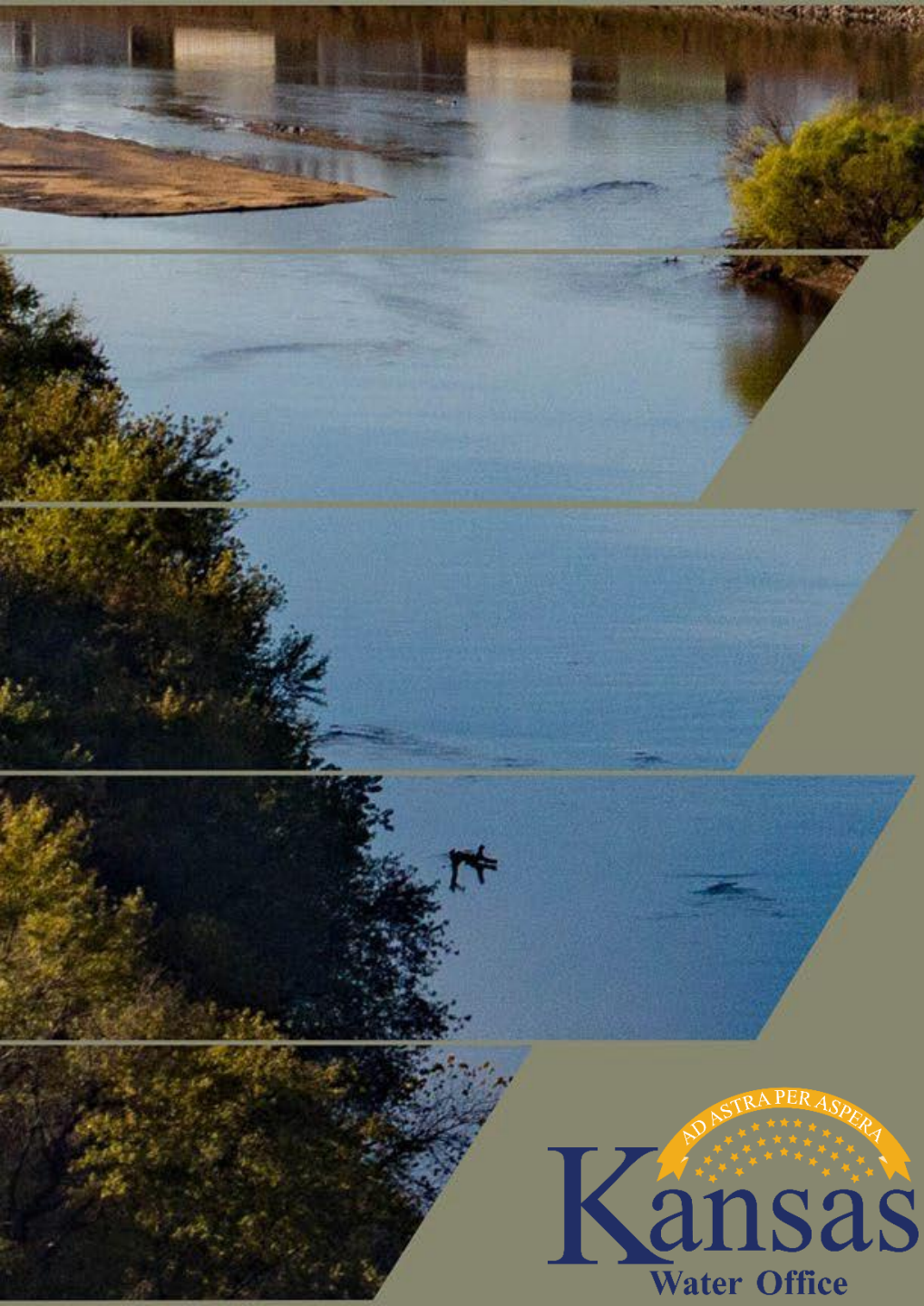

Kansas River Reservoirs Flood and Sediment Study (Watershed Study)

Solomon-Republican Regional Advisory Committee

October 2, 2019

Kansas Water Office

US Army Corps of Engineers.

Kansas Department of Wildlife, Parks and Tourism

Watershed Study Process

SINGLE-PHASE Watershed Studies

Conduct Annual IPR's

Identification of spin-off studies

Sign Cost-Share Agreement

Develop a PMP
Sponsor provides proportional share of funding and/or in-kind contributions

Shared Vision Milestone

Shared Vision Milestone 1
- Shared Vision
- Study Framework
- Draft Report Summary
- Risk Register
- Decision Management Plan
- Presentation

Recommendations Milestone

Recommendations Milestone 2
- Report Summary
- Risk Register
- Decision Management Plan
- Decision Log
- Presentation

Report Milestone

Draft Watershed Plan

Concurrent Review

3 **Approval of Final Watershed Plan**

Shared Vision

- Broad enough to encompass various goals and objectives of individual partners and stakeholders
- Basis for development of goals and objectives
- Identifies study area or geographic focus areas to capture impacts and influences of broadly-identified issues and opportunities
- Develop a comprehensive long-term plan for addressing flood risk management, sediment loading of reservoirs, reduction of flood storage and water supply availability, water quality issues, and drought

Study Scope

- Comprehensive and strategic evaluation of the Kansas River Basin:
  - System operating plan
  - Reservoir operations and manuals
  - Reservoir facilities and features
  - Conditions upstream and downstream of reservoirs
  - Infrastructure
  - Flood risk
  - Drought risk and preparedness
  - Ecosystem degradation
  - Water supply availability and sustainment
  - Other related needs

Issues and Opportunities

- The study will focus on 3 primary focus areas:
  - Flood risk management
  - Sediment management
  - Reservoir operations (e.g. Conditions that influence storage in the various pools and affect the ability to meet releases for uses downstream)
- Also looking at opportunities related to:
  - Infrastructure investment
  - Water supply availability and sustainment
  - Water quality
  - Recreation
  - Ecosystem preservation and restoration

Planning Objectives

- Manage sedimentation in reservoirs to reduce loss of volume and decrease the sedimentation rates for sustainment of authorized purposed and benefits
- Reduce risks to life safety in the Kansas River Basin with a focus on improved flood risk system flexibility under a variety of climate change and land use development patterns
- Reduce both societal consequences and economic damages associated with flood risk in the study area, with an emphasis on improving system resiliency and increasing the long-term integrity of the flood system
- Increase the reliability and availability of water supply
- In conjunction with flood risk management and increasing the reliability and availability of water supply, improve the natural dynamic hydrologic and geomorphic processes in the Kansas River and its tributaries
- Increase the adaptability and resiliency of the water supply, flood risk management, and ecological systems of the Kansas River Basin in relation to climate change

Strategies/Alternatives

- Strategies/alternatives considered would include those necessary to reduce vulnerability and create resiliency of the existing system to ensure safety of communities and to meet the needs of Kansas
- Measures considered could improve reliability of the system and include:
  - Structural restoration
  - Sediment removal
  - Reservoir operational changes
  - Sediment removal using innovative technologies
  - Demand management
  - Reallocation
  - Extreme event (i.e. flooding and drought) planning
  - Watershed management

Outreach and Public Involvement

- Goal is to inform, educate, and provide an opportunity for a diverse set of stakeholders to provide input and reflect a range of different perspectives
- Diverse group of interests in the basin to include:
  - Municipal and water supply customers
  - Communities/adjacent residents, occupants, and landowners
  - Business and industry
  - Landowners
  - Agricultural interests
  - Recreation interests
  - Environmental interests
- Government officials and agencies will also be informed and engaged

Study Outcomes

- Provides recommendations for actions that can be taken to solve the identified problems
- Broad implications for decision makers at all levels of government
- Provides a strategic roadmap that identifies the sequencing of priorities, including where federal authorities and appropriations are available, and where new ones are needed
- Presents the findings and recommendations for future efforts, including potential future projects and studies that could be conducted by the USACE, State of Kansas, sister agencies, and other non-federal entities both near-term and long-term
- Not a project implementation document

Questions?