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Meeting Report

City of Nenana
Port Improvements and River Restoration Pre-Application Meeting

December 10, 2010

Attendees

Sherman Engineering – 456-3853

Mark Sherman, PE mark@shermanenr.com

Tonya Bear, EIT tonya@shermanenr.com

City of Nenana Jason Mayrand nenana1@nenana.net

DEC Engineering Don Carlson don_carlson@hotmail.com

USACE Ellen Lyons Ellen.h.lyons@usace.army.mil

EPA Tracy DeGering (by phone) degering.tracy@epamail.epa.gov

ADF&G Habitat Jim Durst james.durst@alaska.gov

ADF&G Habitat Brad Wendling brad.wendling@alaska.gov

DNR AJ Wait aj.wait@alaska.gov

Purpose: Interagency meeting to discuss alternatives and options to proposed port improvements and river restoration on the Nenana River.

Introduction by Mark Sherman included historical status of the barge landing on the Nenana River. The project was originally funded by a grant from the Denali Commission for the design of a bulkhead wall at the current barge storage and takeout area along the Nenana River. The Denali Commission subsequently modified the scope of work to include a feasibility study for improvements to the current barge landing and to address upstream erosion that is potentially threatening the barge landing. The City of Nenana has a unique opportunity as a multi-modal transportation hub, with rail, highway, air and river transportation facilities. This project is intended to enhance and protect the river transportation elements of the hub.

Sherman Engineering presented historical photographs from 1949, 1959, 1971, 1984 (topographic map) as well as the most recent aerial photo from October 2009 of the section of Nenana River that will be most impacted by the proposed development. An earlier photo from 1916 is also available. A bathymetric map showing the contours of the river bottom is currently in production based on sonar mapping completed in October 2010. The historical photos (attached) show how the river has changed over the course of about 60 years, with each photo having the current river bank locations shown as an overlay. The 2009 air photo has the historical river bank locations also shown as an overlay. The current erosion between the barge landing and the 10th Avenue boat landing appears to have begun significant changes after 1971.

At this time we are not applying for a permit. This meeting presents alternatives to managing the upstream course of the Nenana River in order to receive agency feedback and concerns that can be addressed in the feasibility study. It is our desire to incorporate agency concerns into the various alternative solutions proposed for the Nenana River. The feasibility study is due to the City of Nenana in February, 2011.

The following are the proposed options for upstream erosion control management in conjunction with the construction of new port improvements:

1. "No build" option would include doing nothing for upstream erosion control while continuing with the construction of the bulkhead retaining wall. The disadvantages of this option include the potential for continued erosion and stream bank change that could threaten current improvements including the new bulkhead and existing railroad tracks and tank farm. It is possible the river will erode behind proposed improvements or create a new channel. It is likely that significant and potentially catastrophic erosion will occur as a result of a singular high water event. This option also does not address the ongoing problem of sedimentation along the current barge docking area that requires frequent dredging to remove accumulated sediment.
2. Install bank armoring between the 10 Avenue landing to the upstream end of the proposed bulkhead. This is intended to protect the bank and keep the east river bank in its current location. While this option will protect the east bank it will not improve flow along the bulkhead wall and will require continued dredging operations. It also does not address potential impact to the west bank of the Nenana.
3. Place in-stream barbs between the 10 Avenue landing to the upstream end of the proposed bulkhead and allow the river to naturally fill in between the barbs. The purpose would be to "draw" the river to the west and re-establishing the channel to an alignment more consistent with the 1949 channel. This option should increase velocities along the bulkhead wall when the Tanana River is lower than the Nenana and decrease the amount and extent of dredging necessary to keep the barge landing in service. It is also likely that the west bank of the Nenana will conform to the 1949 location, but it is also possible that an alternative channel will form in response to the changes along the east bank.
4. Place in-stream barbs between the 10 Avenue landing to the upstream end of the proposed bulkhead and move river sediment from the west bank to the east bank between the barbs. This option is similar to Option 3, but forces the changes in the river channel to occur at once, attaining the desired configuration of the river channel in one construction season. This option is the most likely to achieve the desired results for erosion protection, river channel location, improved flow velocity and decreased dredging.

All alternatives include constructing the proposed bulkhead. Options 2, 3 and 4 address managing upstream erosion and Options 3 and 4 also address downstream deposition. Options 3 and 4 will likely require temporary construction of an alternative river channel along the west bank to allow in-stream construction.

Concerns and comments addressed at the interagency meeting include:

1. Jim Durst expressed concerns in regards to the timing of construction.
 - a. Although this part of the Nenana River is not considered a fish habitat, it is a migratory route for fall chum and coho.

- b. Design of the bulkhead should consider migratory patterns along the base of the wall.
2. Sheet Piles may need scour protection or be driven deeper.
 - a. Structural engineer will take into account river conditions and may include tie backs, scour protection, and/or deeper piles in the design. Geotechnical work has been completed and a geotechnical, structural design analysis and report is nearing completion.
3. The existing boat launch will not be adversely affected and will likely improve navigation. The boat landing has not seen any significant erosion at this location and historical air photos document that this location is apparently on a stable section of river.
4. AJ Waite expressed a concern for Mental Health Trust owned land on the west bank. Design should include a reasonable assurance that the island will not be unduly impacted.
5. Modeling of the river will be completed that will show potential impacts on the banks of the river. Don Carlson said, however, that long term velocity changes are predictions only and actual velocities and water elevations could vary from the model results.

Consideration of future impacts on infrastructure needs will be considered. It is believed that the proposed improvements will enhance and benefit future potential development to create a multi-modal transportation interface. The City of Nenana would like to submit the Feasibility Report to the Denali Commission as soon as possible in order to secure the remainder of the design and construction funding that will allow completion of this project in the late fall of 2011. Therefore it is desirable that agency comments regarding the preliminary options are received by January 14, 2011 in order to adequately address and incorporate them into the Feasibility Report that will be submitted at the end of February.

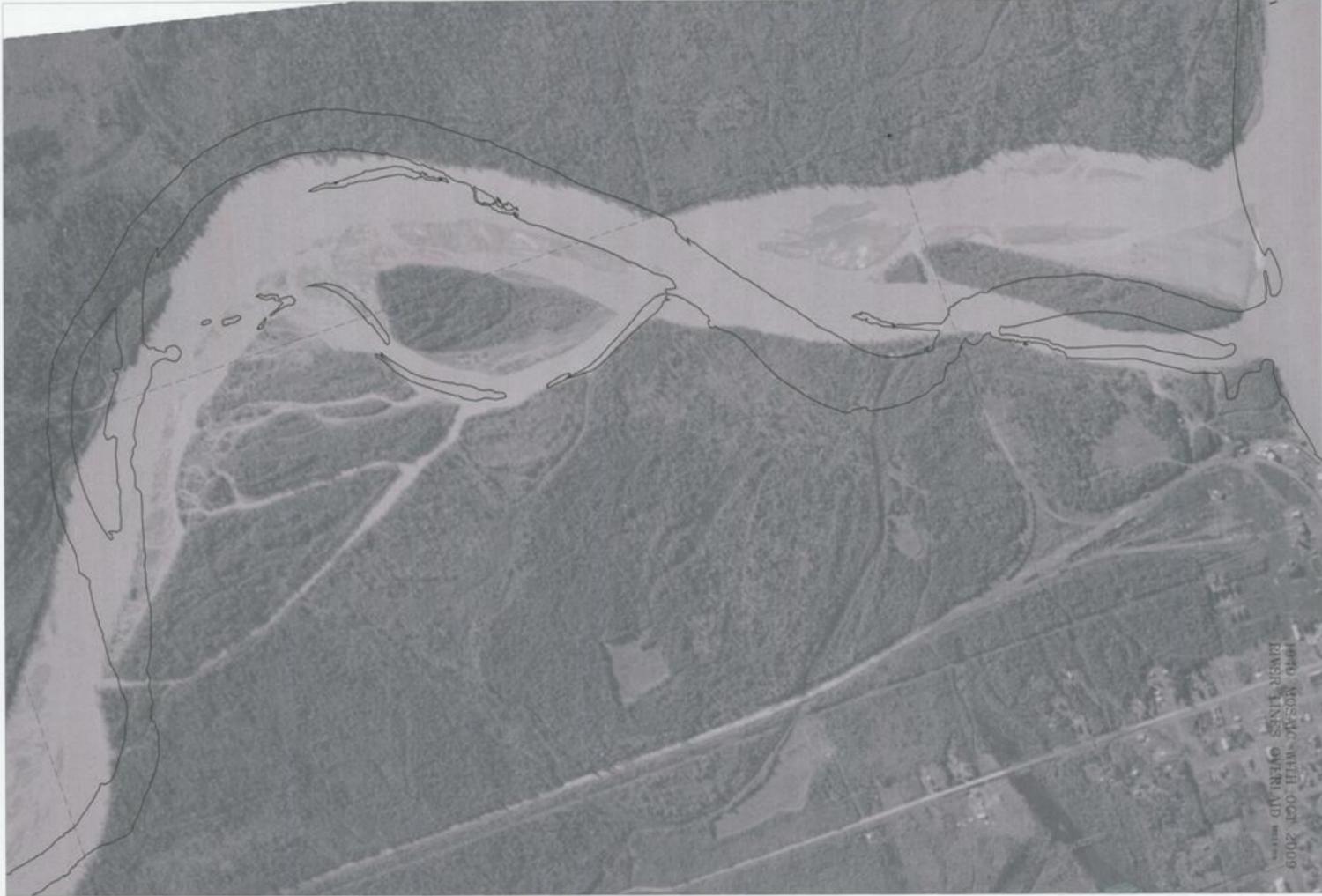
We appreciate your willingness to participate in this planning phase of the project. Please don't hesitate to contact us if you have any questions.

Sincerely,
Sherman Engineering

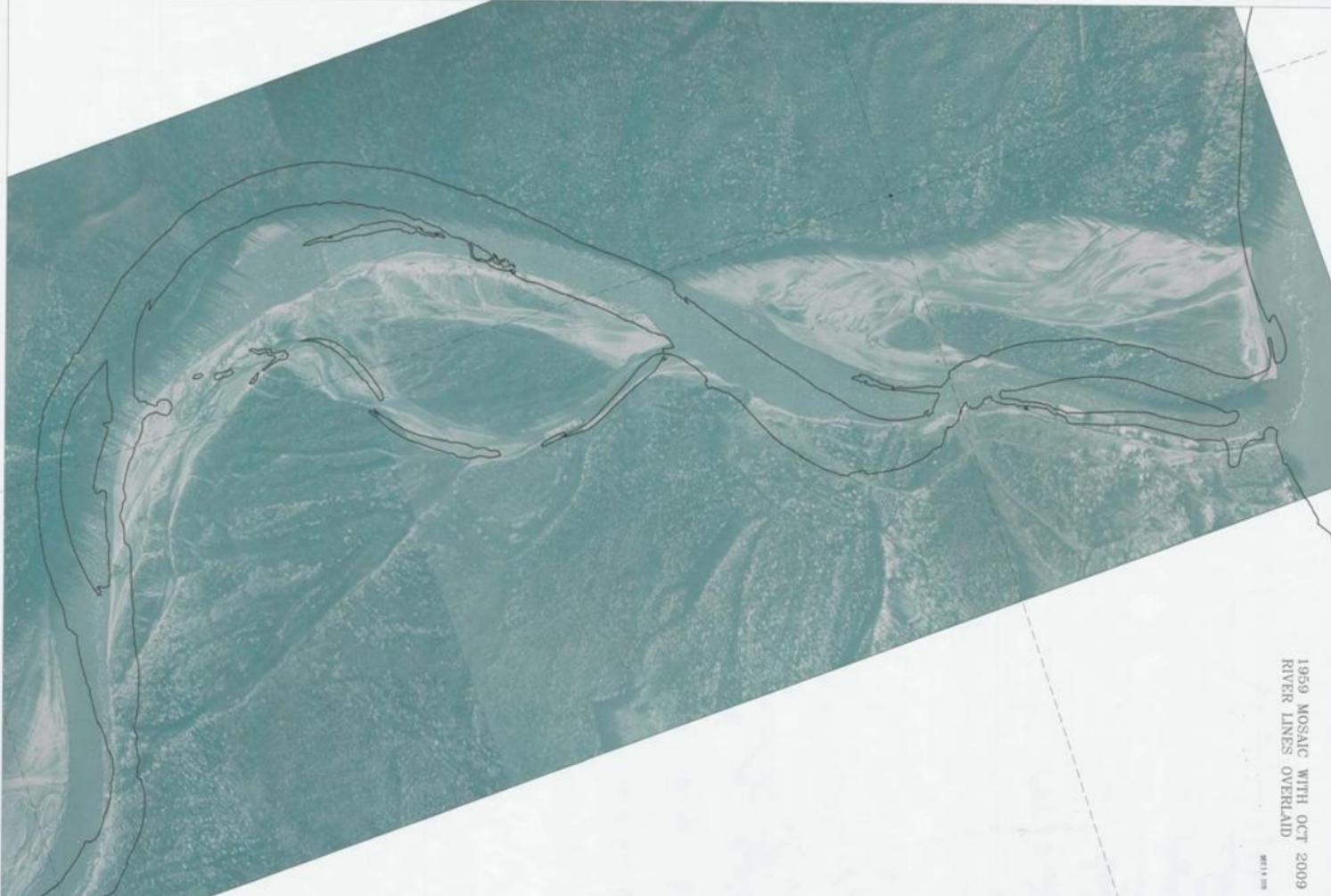


Mark B. Sherman, PE
President

Electronic Copy: all attendees

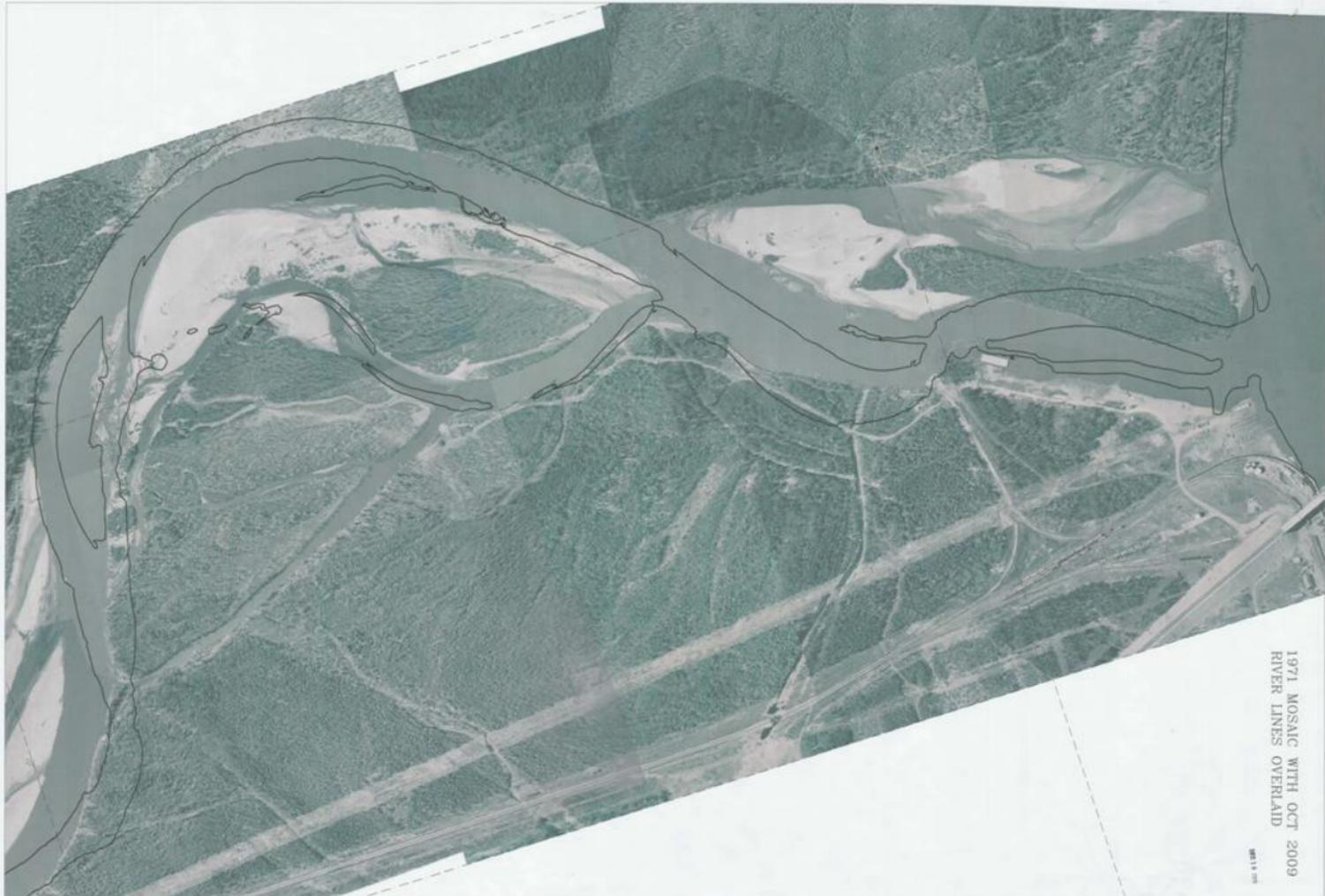


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1971 MOSAIC WITH OCT 2009
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River flow ———
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Photo by [unreadable]