

08/16/23

The following is a summary of work and is for discussion purposes only.

SUMMARY OF FLOOD PLANNING AND WORK DONE AT THE MARK TWAIN ESTATES

1. Flood modeling was done in 2018 - 2019.

- a. Modeling was done to 30% design.
- b. Full drainage improvements are estimated to be \$10 million.
- c. Improvements require alignment with Lyon County downstream.
- d. Flood modeling was done in partnership with Lyon County.
- e. Upstream detention requires land purchase and a federal lands bill that is currently in Congress.

2. In 2020 – 2021 Public Works completed Phase I of the project including:

- a. Installed approximately 30 driveway and street crossing culverts on LaFond, Martin, and Sam Clemens.
 - i. 1,420 feet of 18” culvert pipe installed.
 - ii. 200 feet of 36” culvert pipe installed.
 - iii. \$45,000 estimated cost.
- b. Included excavation and grading of affected drainages and shoulders.

3. 2023 – 2024 Public Works is commencing Phase II of the project including:

- a. Engineering Prospector, Martin, and Sam Clemens drainages to a 100% design.
 - i. \$160,000 engineering approved by the BOCC on August 1, 2023.
 - ii. About \$200,000 more will be needed for this engineering. This expense will be brought to the board for consideration when preliminary engineering estimates are completed.
 - iii. To determine appropriate culvert size, drainage depth and width, riprap, flows, etc.
 - iv. This is in review by the county’s engineer, DOWL Engineering.
- b. Construction costs are likely to be \$1-2 million at this stage. The preliminary engineering report will determine this.
- c. Board action will be needed to fund the actual work.
- d. The county will then go to public bid for the project.

4. 2024 - 2025

- a. The board may direct staff to implement Phase 3 of the project.
- b. Phases 3, 4, etc. would look like the above.
- c. The board may consider directing staff to expedite long-term improvements including:
 - i. Additional project phases reachable with budget funds, engineering load.
 - ii. Coordination with Lyon County downstream.

5. 2025 – 2026

- a. A full project may proceed with:
 - i. \$10 million estimated. Grants will be part of this.
 - ii. Purchase of upstream properties.
 - iii. Addition of flood detention basins.
 - iv. Approval of a lands bill at the north-east corner of the Mark Twain Estates.
 - v. Bring 30% design to 100% design of entire project.
 - vi. Coordinate with Lyon County on their portion (roughly 70%) of the project to the Carson River.
 - vii. RFP and award bid.

The foregoing is estimated and for discussion purposes only.