

## Stinson Beach Nature-Based Adaptation Feasibility Study Stinson Beach Community Center

### Public Meeting, 2/12/2020

- *National Park Service Announcement*
  - February 18<sup>th</sup>, 6:30-8:30pm: Flood Control Zone 5 Advisory Board Meeting
- *James Project Presentation*
  - Question: Can you explain the baseline from which sea level rise is being measured.
    - James Jackson: We are measuring from Mean High Water, or the average daily tidal high water.
  - Question: What is the timeframe for the study project?
    - James Jackson: The feasibility study will be completed in April 2021.
  - Question: How do you manage the impact of visitors on dunes? How do you protect the dunes from visitation with limited funding for parks agencies?
    - James Jackson: Great question. A success story of dune restoration and management of human impacts is in Linda Mar in Pacifica. They used pegs with ropes and educational signage to design preferential access ways through the dunes that focuses foot traffic while not cutting a flood path through the dunes. This will be a consideration in development of a long-term management and monitoring process for the dune system, as it is important to maintain dune vegetation and keep the dunes stable for flood protection impacts. Asilomar is another example of successful barriers, boardwalks, and fencing.
  - Question: Does riprap accelerate erosion on the beach?
    - James Jackson: It depends, but it certainly can. If the shoreline is eroding and there is an impermeable surface along the shoreline, it can encourage local scouring.
  - Question: There is a seawall at west end of Seadrift. Where would a dune system be in relation to the seawall.
    - James Jackson. The west end of Stinson Beach has very little existing beach width, and therefore likely low feasibility for dune creation in that location.
  - Question: Stated observation that riprap produces less erosion than a seawall. Is the accretion of sediment near the Calles and Patios at the expense of the erosion occurring near Seadrift?
    - James Jackson: They are likely related, but would need to do additional modeling to answer with certainty. Sediment transport in Stinson beach is West to East. This be further addressed as the study progresses

- Question: What are the project's assumptions for rising mean high water over time?
  - James Jackson: We are selecting sea level rise scenarios consistent with the C-SMART Vulnerability Assessment and California State Guidance, using a medium-high risk aversion scenario. We expect to consider up to 1 meter of sea level rise for this project.
- Question: If a nature-based solution can potentially provide protection up to 1 meter of sea level rise, when is it projected that 1 meter will happen?
  - Updated answer based on State Sea Level Rise Guidance: Approximately 2070.
- Question: Are there huge cost differences between four alternatives presented?
  - James Jackson: We will see. That is part of this project yet to come.
- Question: No changes to the sea bottom are allowed, correct?
  - James Jackson: Yes. Offshore of Stinson Beach is the Greater Farallones National Marine Sanctuary and in today's regulatory climate we cannot trigger impacts to the sanctuary, including altering the seabed.
- Question: Is Stinson Beach a big project or little project, relative to other current planning efforts?
  - James Jackson: It is a medium sized project, with unique characteristics.
- Question: Thanks to Marin County for undertaking this progressive project. Given the short project timeline, how do we learn things like how vegetation impacts the dunes, how cobble impacts the beach, and what mitigating factors will accomplish? How do we see what veg does? What stone on beach does?
  - Jack Liebster: This project is evaluating the conceptual feasibility of using a dune system as a resilience strategy. We are considering a pilot study following completion of this feasibility study to test those things listed. Another question to consider is who ultimately will take responsibility for implementing a project such as this.