COUNTY OF VENTURA
PUBLIC WORKS AGENCY

MEMORANDUM

DATE: February 19, 2025

TO: Gregg Strakaluse, Director

FROM: Jeff Palmer, Assistant Director

SUBJECT: **Madea Creek & Brian Trushinski's February 13, 2025, Email**

On January 30, 2025, I presented the attached PowerPoint to the Oak Park MAC. The presentation contained hydrological data that formed the basis of need for Madea Creek as a red-lined channel to manage stormwater flows of up to 5,300 cubic feet per second (100-yr. storm event). I reviewed the need for vegetative maintenance within the creek to adequately convey stormwater flows and protect people and property, but recognized Watershed Protection's commitment for a careful and balanced approach to managing flora and fauna and preserving Madea Creek as a neighborhood amenity. The conclusion of the presentation was met by the MAC members with gratitude and what appeared to be a greater understanding for the need to perform vegetative maintenance within Madea Creek, and that this maintenance has evolved to achieve a balance between stormwater management, environment, and fire protection. There were no requests for additional information at that meeting.

In regards to Mr. Trushinski's February 13, 2025 email, I have read all the attachments, discussed the information with engineers, and provide the following thoughts and recommendations.

Modeling Hydrology

Mr. Trushinski mentions FEMA mapping of Medea Creek. The latest studies for Medea Creek were done, by FEMA in 2008 and 2010. These areas are mapped as an "A" flood zone. It's important to look at the differences between a FEMA flood mapping and Medea Creek Hydraulics study which uses HEC-RAS modeling, Civil 3D AutoCad, and scour analysis. FEMA zones establish areas susceptible to flood and designate those zones for flood insurance. The other, more technical hydraulic mapping for the creek uses AutoCad Civil 3D, along with a separate scour analysis. This analysis was performed in 2010 and provides a more precise review of the flow path of the creek. The result showed flow depths up to 12 feet, velocities up to 14 feet per second and flow widths of nearly 150 feet wide. Medea creek is, therefore, a major flood control facility. A major flood surrounding Medea Creek will uplift or knock over any trees within the flow line, pulling

the roots out of the ground, pulling any rip rap out, damaging the creek and potentially blocking culverts and bridges.

Based on these studies, there is certainly adequate information to understand the flow and flooding potential of Medea Creek. With additional impervious development in the last 15 years, along with more frequent, high intensity storm events, it's highly unlikely that the hydrology flow volumes and speeds would be less than they were in 2010. If a new hydrology study of the creek was performed, the results could be considered by FEMA and inadvertently impact flood zones and insurance ratings for homes in the area.

Landscaped Vegetation

Currently, the Lower Slope and Upper Slope are not formally landscaped or irrigated, although native vegetation is present and has been maintained. Native vegetation in that area of the county is generally mustard plant, castor bean, related mountain sage, upland scrub and dry weeds and grasses. This matches what we see on the natural areas around the valley. It dries each year and becomes a potential impairment to drainage, as well as a fire hazard to nearby homes. Over time, year after year, the vegetation load grows in thickness and depth. Allowing uncontrolled growth within Madea Creek presents a hydraulic debris hazard and a fire fuel hazard. Also, burn scaring of land after a wildfire is concerning because highly scared areas are prone to debris flows and erosion. If the desire is to in some way allow vegetation to remain in the Upper Slope, it would require a significantly higher level of landscape irrigation infrastructure, select species selection, and ongoing maintenance services to be provided. This could only be provided by adjacent property owners or the MAC. In this case, the Upper Slope would present a higher level of fire risk to adjacent homeowners.

As presented to the MAC, Watershed Protection has implemented a revised maintenance protocol that carefully protects habitat and selectively removes invasive vegetation along the Lower Slope, high flow area, of the channel. This includes the removal of non-native species that become trees such as willow, palms, ash and other large vegetation. Cat tails and marsh type plants will remain. In both the Lower and Upper Slope areas, dry vegetation is selectively removed to eliminate hydraulic debris issues, and the maintenance provides added wildfire safety to property owners.

CONCLUSIONS

1. The presentation regarding Madea Creek was well received by MAC members and those in attendance at the January 30th meeting.
2. No other comments or questions have been received other than Mr. Trushinski's February 13th email.
3. 2010 hydraulic modeling could be updated to include an increased amount of impervious development and additional rainfall data (reflective of more frequent and intense storm events). Results could adversely impact property owners' FEMA flood zone mapping and insurance rates. Additionally, the updated modelling

effort would need to be funded outside of Watershed Protection, since these efforts are traditionally done by FEMA.

4. Allowing for landscaping to occur within Madea Creek's flow path would need to be regulated (permitted) by the Watershed Protection District for type of vegetation to not pose a flood hazard under high flow conditions. Enhanced growth would require landscape irrigation infrastructure and a higher level of landscape maintenance services to be provide by the permittee or MAC.
5. By its nature, allowing more vegetative growth in the upper flow area provides wildfire fuel and the potential for creating a burn scaring of the land after a wildfire. Burn scarred areas are prone to debris flows and erosion.
6. Watershed Protection permitting will accept permit applications for select landscaping infrastructure and planting from property owners along the Upper Slope areas adjacent to private property.
7. Staff recommends that Watershed Protection monitor its efforts over the next year and report back to the MAC in 6-months on its vegetative maintenance efforts.

If you have any questions, please feel free to contact me at this office.

Attachment:20250129_Medea Creek PowerPoint

cc: Jeff Gorell, Board of Supervisor District 2
Sevet Johnson, County Executive Officer
Ashley Batista, Board of Supervisor's Chief of Staff District 2