



Surfrider Foundation
Ventura County Chapter – Matilija Coalition
PO Box 1028 Ventura, CA 93002
(805) 667-2222 www.matilija-coalition.org



October 20, 2008

Douglas E. Chitwood
Los Angeles District
US Army Corps of Engineers
915 Wilshire Blvd
Los Angeles, CA 90017

Via e-mail: Douglas.E.Chitwood@usace.army.mil

Comments on Matilija Dam Final Design – Slurry Disposal

Dear Mr Chitwood,

Thank you for the opportunity to provide written comments on the Slurry Disposal component of the Matilija Dam Ecosystem Restoration project. Our comments are based upon our participation in this project since its inception, including the three-year federal Feasibility Study completed in 2004.

Slurry Disposal Project Component: 2.1 million cubic yards of fine sediments from Matilija reservoir are to be removed by slurry pipeline and deposited within the floodplain downstream.

History: The slurry disposal sites that are now referred to as BRDA were selected and presented to the public as the preferred alternative in the Feasibility Study and Environmental Impact Report. From our participation in the three-year Feasibility process, it was our understanding that the disposal sites identified as the preferred alternative were intended to serve as temporary storage, and would erode downstream to nourish the floodplain and/or flush into the ocean during future floods. This was an alternative to the original proposal to deposit the fines below the trailhead to the recently acquired Ventura River Preserve (MODA).

Synopsis: There is a fundamental difference between the several smaller temporary disposal sites presented in the Feasibility Report (BRDA), and the single more permanent site (MODA). Because of a number of problems with the MODA site, we recommend using the temporary stockpiles at BRDA for disposal of the fine sediments from Matilija Dam.

Our Position: The position of the Matilija Coalition has been clear and consistent for the duration of this project. This has documented in our written comments, which have been available on our web at www.matilija-coalition.org. A summary of these comments is included as an addendum to this letter. **Our position remains the same: Community concerns should be the highest priority in order to assure the success of this project.**

Evaluation Criteria: At the Design Oversight meeting on October 2, 2008, there was discussion of evaluation criteria for selection of the slurry disposal site(s). These criteria were listed as:

- Environmental impacts
- Constructability
- Footprint
- Height of stockpile
- Cost

Suggested Additional Criteria:

- Short term vs. long term impacts/benefits
- High flow mobility
- Community acceptance/resident impacts
- Groundwater quality
- Water supply
- Safeguard existing infrastructure
- Recreation
- Land availability
- Upland disposal
- Optimize by combining MODA and BRDA 1&2

These additional criteria should be included in evaluation of slurry disposal alternatives. Community acceptance as well as the long-term disposition of the fine sediments should be ranked highly in the planning process.

Existing MODA proposal: The MODA site would require careful design and restoration to ensure revegetation and stabilization of the slopes, prevent flooding from upland tributaries, and integrate with the Meiners Oaks levee design. The proposal to split MODA into two sites and allow Cozy Dell Creek to flow through a channel appears problematic. First, stabilizing the slopes constructed with fine silt and clay will be difficult, if not impossible. Any erosion of this material will impact the channel, and slumping could restrict flows and create flooding in the upstream neighborhood. Second, the aesthetics of an isolated mound of sediment are problematic. Third, revegetating the thick clay layer and replacing the existing oak and sycamore trees will be expensive and likely unsuccessful. Finally, there are also concerns with the alternative Cozy Dell channel alignment; this would concentrate and direct flows into the right bank of the river, adversely impacting the streambank and existing pool habitat.

Perhaps most importantly, MODA would have significant impacts to the community. The primary trailhead for the Ventura River/El Nido Preserve is one of the only highly utilized public access points to the floodplain within the entire watershed.

Optimization Opportunities: We have mentioned at several meetings that there may be an opportunity to optimize the slurry disposal to achieve the goals of the project and satisfy the increasing stakeholder concerns. Attached is an example of a simple analysis of the capacities of each of the proposed disposal sites. This analysis shows that:

- 1) The entire slurry volume could fit on East MODA.
- 2) The entire slurry volume could fit on BRDA 1 and BRDA 2 with additional design

These are two examples of potential alternatives beyond the two current proposals, and this analysis is intended to demonstrate that it is worth exploring other options. For instance, expanding BRDA sites 1&2 may be achieved spatially and/or temporally. The capacity of these sites may be enlarged, either through an expanded footprint or increasing the height of deposition. Since it may be necessary to phase the slurry operation, some portion of the disposal areas may

become available for reuse following a storm event, effectively increasing the capacity of the sites. Land acquisition is simplified with these sites because both of these properties are under the control of local organizations (Ventura County and Ojai Valley Land Conservancy.)

A combination of sediment management measures may yield an optimal solution. Other sediment management considerations may include mixing some of the fines into the upstream storage sites in Matilija Canyon, or transporting some material out of the project area.

Ecosystem Objectives: The stated objectives of the Matilija Dam Ecosystem Restoration project are to restore the riparian habitat and natural processes of the ecosystem. Federal projects consider a 50-year horizon, as analyzed using Habitat Evaluation Criteria (HEP) in the Feasibility Study. Therefore, it is necessary that the long-term effects of the slurry disposal be carefully considered in an ecosystem context.

We recommend that the slurry disposal component be designed to avoid permanent alterations to the landscape and ecosystem. The short-term impacts from river transport of fine sediments will provide greater long-term ecosystem restoration value than attempting to permanently stabilize this material.

The Matilija Coalition looks forward to further refinement of this project component in collaboration with the stakeholders and public agencies to reach a solution that will maximize the project objectives and retain the support of the affected community.

Sincerely,



A. Paul Jenkin, M.S.

Coordinator, Matilija Coalition
Environmental Director, Surfrider Foundation, Ventura County Chapter
(805) 648-4005 paul@matilija-coalition.org

cc: Peter A. Sheydayi, VCWPD

Attachments:

Addendum I: Relevant excerpts from previous Matilija Coalition comment letters
Addendum II: ANALYSIS OF SLURRY DISPOSAL SITE CAPACITIES

Addendum I: Relevant excerpts from previous Matilija Coalition comment letters

See also:

www.matilija-coalition.org
<http://venturaecosystem.blogspot.com/>

September 26, 2003

Comments on Matilija Dam Ecosystem Restoration Feasibility Study F4 Report

- A project with significant adverse impacts to the community ultimately will not be feasible, so alternate slurry disposal sites should be identified as soon as possible and future project definitions should be modified before they are presented to the community at large.

Plan Formulation and Community Concerns:

Community concerns should be a priority in the planning process. Dam removal projects are typically controversial, and community buy-in is a key issue in creating a viable project. A project with significant adverse impacts to the community ultimately will not be feasible, as community opposition can easily prevent a “clean” CEQA review and would adversely affect funding opportunities.

Many of the project definitions currently include a slurry disposal site in the Meiners Oaks area. The site identified is a highly visible community asset. The Ojai Valley Land Conservancy, an organization that clearly represents the greater Ojai community, has already registered opposition to the use of this site.

We recommend that alternate slurry disposal sites be identified as soon as possible and future project definitions are modified before they are presented to the community at large.

March 24, 2004

Comments on the Matilija Dam Ecosystem Restoration Feasibility Study Alternatives Formulation Briefing Report (AFB) Milestone

The project description still includes the use of a slurry disposal site that has been clearly ruled unacceptable to the local community. We understand that this issue is currently being refined, but we must insist that this be resolved prior to the release of the public review document.

August 30, 2004

Comments on Matilija Dam Ecosystem Restoration Project F5 Draft Feasibility Study

Our previous comment letter, dated March 24 2004, focused primarily on some of the more visible **potential public impacts including the *Slurry Disposal Site*, *Levees***, and the plan for *Temporary Stabilization* of sediments in Matilija Canyon. The F5 Draft shows considerable improvements in these aspects of the project, and we believe that the impacts of these measures have been significantly reduced in the most recent project description. However, we do encourage that further refinements during the detailed design phase should be considered with the goal of enhancing the “Ecosystem Restoration” objectives of the project.

October 11, 2007

Matilija Coalition comments on Sediment Management VE Study

9. Overexcavate slurry disposal site and mix silt with reserved in-situ material to facilitate revegetation and post project uses

This measure resulted from discussions regarding the feasibility of revegetation on top of the fine sediment disposal sites. Fine silts and clays are relatively impervious, preventing adequate drainage for successful revegetation. Mixing the fines with in-situ sands may help with this issue. However, the issue of slurry disposal will require further analysis and consideration. ***If there is now a preference to use the single disposal site previously eliminated from consideration during the feasibility phase, further CEQA/NEPA environmental review will be necessary.*** This is due to a fundamental change from the several smaller temporary disposal sites identified in the Feasibility Report, to a single permanent site. This site would require careful design and restoration to ensure revegetation, prevent flooding from upland tributaries, and integrate with the Meiners Oaks levee design. This site also has significant impacts to recreation, since it is below the primary trailhead for the Ventura River/El Nido Preserve, one of the only highly utilized public access points within the entire watershed.

Addendum II: ANALYSIS OF SLURRY DISPOSAL SITE CAPACITIES:

The following is a simplified analysis of the capacities of the various slurry disposal storage alternatives:

For simplicity, it is convenient to convert the storage volumes into Acre-feet. This allows a simple calculation of the depth of sediment required per acre.

$$1 \text{ Acre-ft (AF)} = 1613.33 \text{ Cubic Yards (CY)}$$

$$\text{Total storage needed} = 2.1 \text{ million CY} / 1613.33 = 1302 \text{ AF}$$

The fine sediment removed from the reservoir of Matilija Dam would cover 1302 acres to a depth of one foot. (Or 130 acres 10 feet deep, etc)

I. MODA – Meiners Oaks Disposal Area

The MODA site as currently proposed is as follows:

	West MODA	East MODA	Combined MODA
Disposal area (acres)	27	49	76
	29%	71%	100%
Corps Estimated Capacity	671,000	1,667,000	2,339,000
Acre ft	416	1033	1450
Calculated Avg height from volume:	15	21	19
Corps Estimated Average Height: ft	15	35	19
Calculated volume from given height:	405	1715	2120

From this simplified calculation, it appears that there may be more storage capacity than assumed at these sites. The proposed distribution of sediment, with 71% at east MODA, provides 1450 AF of storage with an average depth of 21 feet on East MODA. Depositing 35 feet of sediment on East MODA would provide 1715 AF of storage, more than the 1302 AF necessary. Alternatively, on East MODA 1302AF/49 acres = 26.5 ft average height.

CONCLUSION: There is enough space on East MODA to receive all 2.1 million cubic yards of fine sediment at an average height of 26.5 ft.

II. BRDA – Baldwin Road Disposal Areas

The table below summarizes the capacities of the BRDA disposal areas (heights rounded to the nearest foot):

BRDA 1	BRDA 2		BRDA 3	BRDA 4	BRDA
50	25		11	32	118 Acres
36%	22%		11%	31%	100%
800,000	500,000		240,000	700,000	2,240,000 CY
496	310		149	434	1388 AF

10	12		14	14	12 ft
6	15		13	14	12 ft
300	375		143	448	1266 AF

For the Baldwin Road sites, BRDA1 would require a 10 foot average deposition and BRDA 2 a 12 foot depth to achieve the proposed capacities of 496 AF and 310 AF respectively. On the other hand, using the 6ft and 15 ft heights proposed provides a storage capacity of 1266 AF.

Using this spreadsheet, it is possible to look at other deposition scenarios. For instance:

BRDA 1	BRDA 2	BRDA 2A	BRDA 3	BRDA 4	BRDA
50	25	15	11	32	118 Acres
15	15	15	0	0	ft
56%	28%	17%	0%	0%	100%
1,209,998	604,999	362,999	0	0	2,177,996 CY
750	375	225	0	0	1350 AF

In this case, all the fine sediments are deposited at the upper BRDA sites. These sites are situated largely in the floodplain, and would be designed to erode during 10yr flows or greater. Here the numbers represent increasing the height and/or useable area at the two sites. Another way to gain useable area would be to separate the slurry onto two phases, waiting until a significant volume had eroded allowing re-deposition at those sites. BRDA 2A represents this additional area either through reuse or expansion of the existing proposed site.

CONCLUSION: This estimate suggests that with further design it could be possible to achieve the slurry objective using only BRDA 1 and BRDA 2.