



## M e m o r a n d u m

Date: September 30, 1998

To: CALFED Management Team

From: Lester A. Snow  
Executive Director

*K. Howell  
for LAS*

Subject: Funding for Madera Ranch

**Issue**

Should the CALFED Policy Group recommend use of FY 98 or FY 99 federal Bay-Delta Act funds for land acquisition at Madera Ranch as part of the development of a conjunctive use project?

**Discussion**

At the last CALFED Management Team and Policy Group meetings, the potential use of federal Bay-Delta Act funding for land acquisition at Madera Ranch as part of the development of a conjunctive use project was discussed. The major concern of the Policy Group was the overall risk associated with proceeding with land acquisition on the project while planning is still in the early stages and many questions remain unresolved.

The BDAC Ecosystem Roundtable discussed this issue at their September 21 meeting. Most Roundtable members indicated that the project could ultimately prove to be a good project and, if so, that it may be acceptable to use FY 99 funds. However, several Roundtable members felt that it was not acceptable to proceed with the land acquisition at this time, given the early planning stage of the project and the significant number of issues that still need to be resolved.

The major issues that need to be resolved include project cost, yield, and feasibility, impacts on local and upstream water users, relationship with CVPIA, and environmental impacts and benefits. Three Roundtable members prepared more detailed comment letters which are attached.

**Staff Recommendation**

While the project has merit and the sponsors should continue to pursue its development and work to resolve the issues, the Policy Group should not approve FY 98 funds for the project. If progress can be made on resolving the issues, the project should be reconsidered for FY 99 funding.

**CALFED Agencies**

**California**  
The Resources Agency  
Department of Fish and Game  
Department of Water Resources  
California Environmental Protection Agency  
State Water Resources Control Board

**Federal**  
Environmental Protection Agency  
Department of the Interior  
Fish and Wildlife Service  
Bureau of Reclamation  
U.S. Army Corps of Engineers

Department of Agriculture  
Natural Resources Conservation Service  
Department of Commerce  
National Marine Fisheries Service

From: David Yardas@EDF on 09/29/98 11:30 AM PDT

Subject: Madera Ranch proposal

Cindy:

Please make sure that the following EDF comments are distributed to the CALFED management and policy groups, and to Brent Walthal and Roger Patterson at USBR, in time for tomorrow's meetings. (I understand that you have received other letters of concern as well, so perhaps this can be part of a package.) Can you also please distribute copies of our 12/2/97 letter raising many similar concerns with regard to another hastily-advanced USBR proposal to use FY98 Bay-Delta ecosystem funds for groundwater banking purposes at the Kern Water Bank? Lastly, of course, please let us know what happens.

Many thanks,

David Yardas  
Environmental Defense Fund

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September 30, 1998

MADERA RANCH GROUNDWATER BANK  
EDF Comments, Questions, and Concerns (in progress)

Summary It appears that the proposed Madera Ranch groundwater bank may, with many important qualifications and assumptions, be able to assist in efforts to protect and restore Bay-Delta ecosystem health as part of an overall CALFED solution. However, such conclusions are largely speculative at this time: it is equally if not more likely that the project would provide, at best, marginal ecosystem benefits at tremendous total cost. (The latter result would seem to be more likely given what we understand to be growing opposition to the project from a variety of "local interests.")

Equally distressing is the way that the current proposal for use of Bay-Delta ecosystem funds has been handled: it certainly appears to have been initiated by USBR as a water development project (i.e., so-called "toolbox" measure) for the principal if not exclusive benefit of the SLDMWA (see joint letter dated November 11, 1997). Only belatedly, it seems, has USBR focused on its "ecosystem restoration" potential, or provided critical information to those who have been asked to advise CALFED on "smart" ecosystem investments, when those efforts were needed to rationalize an end-of-year raid on the recently-established Bay-Delta water acquisition reserve. Certainly SLDMWA and other water development proponents have not been willing to commit their own funds to the project to date, ironically for many of the same reasons that continue to give us pause.

As we urged at the 9/21/98 Ecosystem Roundtable meeting (the first and only Roundtable

meeting to date where the Madera Ranch project was discussed in any detail), EDF believes that the only proper and fiscally prudent course of action at this point in time ? even at the risk of losing the overall acquisition opportunity -- is to (1) slow down, (2) take the time that's needed to assess the project and its many potential implications and unknowns in detail, (3) revise and/or clarify the proposal where needed, and then (4) put it through the same rigorous and competitive evaluation process that the Ecosystem Roundtable has worked hard to establish since its inception, and which we and others point to repeatedly -- in Washington D.C. and elsewhere -- as the best overall assurance that we're spending the public's money wisely.

In support of the above recommendation, I have attempted to summarize below the project and proposal insofar as I understand them to date. I have also included an initial list of 35 questions (the list keeps growing) which I believe must be carefully addressed and resolved before we could honestly conclude that we were, in fact, making a good ecosystem investment as well as priority use of public taxpayer funds. We would, in any case, ask for and appreciate a detailed response to each of these questions as soon as possible.

**Overview** A current USBR Proposal (9/4/98) seeks a rushed decision from the CALFED Policy and Management Groups in early October in favor of using \$14.5 million in FY98 Bay-Delta Act funds -- funds previously reserved for environmental water acquisition purposes --to acquire a fee interest in land and related interests at the 13,600 acre Madera Ranch. USBR indicates that an additional \$25.5m in land acquisition funds is "currently being sought" from private sources, including grants (\$8m) and unspecified loans (\$17.5m), to enable timely acquisition of the Ranch, a portion of which (up to 3,000 acres?) would eventually be used for the above-ground elements (spreading basins, wells, conveyance canals, etc.) of a proposed groundwater bank. The Madera Ranch lands are also alleged to represent important potential upland habitat for up to 40 special-status species.

**Purchase Price** Taken together, the above funds would sum to \$40m, an amount which USBR estimates to be "the cost of the land for the Project" but for a \$10m "premium" to be paid to the landowner (the amount apparently needed to reach a negotiated land purchase price of \$50m, or approximately \$3,700/acre). According to project proponents, the seller believes the property to be worth as much as \$65m (\$4,780/acre), while others indicate that fair market value (presumably absent consideration of its potential as part of the proposed groundwater bank) is closer to \$30m (\$2,200/acre). (All of these estimates appear to be based on prospective development/irrigation of the land for agricultural/other purposes. However, based on surrounding dry-land values, the land could be worth as little as \$500/acre, i.e., approximately \$6.8m.) There is, as far as we know, no "official" or accepted appraisal against which to evaluate these potentially conflicting claims.

(From a buyer's point of view, the estimated fair market value would be the amount for which the property could likely be re-sold should the groundwater bank fail to "prove out" or other problems arise. Said another way, the current purchase price includes a \$10-40m "risk" premium that will have to be borne by someone. We have seen no estimates nor discussion of any "premium" that might be justified for the purposes of upland habitat preservation other than those implied by the difference between the various estimates noted above. However, the

ongoing failure of the Bureau and the Service to budget any funds for Madera Ranch purposes -- most recently as part of a proposed rework of the \$97m CVPIA implementation budget for FY99 -- would appear to suggest that the Project is still not a top priority for such purposes as anadromous fishery restoration, environmental water acquisitions, land retirement, refuge water supplies, or the mitigation of "other" CVP impacts.)

**Development Costs** USBR estimates that an additional \$60-70 million will be needed for the costs of facility development (e.g., spreading basins, extraction wells, conveyance canals, etc.) As proposed by USBR, these costs would be borne by the SLDMWA, and/or by other agricultural and/or urban water agencies. USBR also reports that the SLDMWA will "consider" paying the \$10 million land purchase premium discussed above, but that such premium would also be reduced by one dollar for every dollar that actual development costs exceed \$60m. While the details of this proposed arrangement are particularly vague (when would such payment be made? what if actual development costs exceed \$50m? etc.), SLDMWA representative Laura King was unwilling/unable to make any funding commitments to this effect or otherwise as of 9/10/98 ? "we're still taking a look at the project, which quite frankly has not been a real high priority for us. (The SLDMWA has been Reclamation's official "partner" on this project since at least November of 1997, when Roger Patterson and Dan Nelson co-signed a letter of intent regarding "Phase 1" of the project as they defined it.)

**Total Capital Costs** Thus, as proposed, total estimated capital costs for the project (excluding interest) would be \$40m + \$10m + 60m = \$110m, plus any "development cost overrun" in excess of \$70 million. Annual interest costs (on the land purchase loan, as accrued during construction, etc.), as well as annual operations, maintenance, and other contingencies must also be factored in. Depending on a variety of assumptions, EDF estimates that these annual costs could easily exceed \$1.0m/year exclusive of the costs of loan principal repayment, restoration and management of acquired lands, etc. (In the 8/24/98 information packet distributed to Integration Panel members, USBR estimates annual O&M costs at \$400,000 and annualized capital costs at \$6.9m. This estimate is based, however, on only \$25m in "capitalized" acquisition costs and the minimum \$60m in development costs, as well as a mid-range estimate of annual yield as discussed further below.)

**Benefits Apportionment** The USBR proposal suggest that the ratio of the above capital payments -- \$40m assumed from ecosystem (or ecosystem-related) sources and \$70m assumed from water user sources ? be used to apportion any and all storage space and eventual water supply (yield?) benefits that may result from building and operating the project. (USBR notes that "such environmental storage benefit would be in addition to the project mitigation requirements," which presumably would include consideration of the fact that, as currently proposed, all "put" water would come from increased ecosystem diversions.) This "payers benefit" approach to the proposed allocation of prospective project benefits would appear to be the flip-side of the "beneficiaries pay" principle which CALFED has thus far embraced as "the cornerstone" of its evolving financial strategy, and which Interior also adopted for financing the so-called "toolbox" measures it envisioned as part of its 11/20/98 "b(2)" decision. (If the project truly represents a top ecosystem priority, it might also make sense to use future ecosystem funds to finance some or all of the ensuing development

costs ? provided, of course, that that resulted in a commensurate increase in assured ecosystem benefits.)

Of course, the proposal leaves to some later day, and presumably some future negotiation, the many important details as to how such "benefits" would actually be measured, allocated, and assured. Suffice it to say that providing or assuring such details is beyond the scope or capability of any set of prospective cost-share participants at present, if only because of the ongoing lack of a secure operational "baseline" against which prospective ecosystem and/or water supply benefits can even be measured.

**Source Water** The above capital costs do little, of course, to determine where the water to be stored in the Madera Ranch groundwater bank would come from. As noted by Snow (9/10/98), "the operation of any storage project is key to realizing environmental benefits or to causing environmental impacts, so to assess the project, you would need to know when and where the water would be diverted to storage, when and how much water would be available for environmental use, and who controlled the decisions on these issues."

USBR proposes that this "put" water ? up to 12,500 AF in any month, and up to 112,500 AF per year as modeled -- come from two basic ecosystem sources: (1) exports of "surplus" water in the Delta whenever "excess" state or federal conveyance capacity is available, and (2) diversion of San Joaquin River flood flows (i.e., when flows are sufficient to reach Mendota Pool). No consideration appears to have been given to other possibilities, e.g., dedicating and/or acquiring and storing some portion of the water already committed/currently depleted south of Delta (although "rescheduled" water ? water that is allocated to CVP contractors in one year but carried over free of charge in CVP reservoirs for their exclusive use and benefit the ensuing year ? was mentioned as another possibility in recent USBR briefings.) Again, what USBR proposes is that "the representatives of each funding source be included in developing the operating principles" that would govern these and many other issues.

**Ecosystem Uses** USBR describes four general possibilities in terms of prospective ecosystem uses of stored "environmental" water (assumed extraction capacity 12,500 AF/month using 113 groundwater pumps): (1) supplying a portion of south of Delta refuge water deliveries; (2) San Joaquin River flow supplementation; (3) export curtailment (i.e., delivery of pumped groundwater to South of Delta contractors in lieu of an equivalent amount of exports); and (4) sale of stored water to ag and/or urban "bidders" in exchange for cash (to purchase something else, pay off loans, etc.). As noted previously, each of these proposed uses raises fundamental issues about the "baseline" upon which water withdrawn from storage would presumably build.

**Prospective Yield** Estimates of the project's expected "yield" (definitions vary) range from as little as 10,000 AF/year on average and 60,000 AF/year critical peroid average (Rosekrans-NNG modeling results 8/31/98) to as high as 96,000 AF/year on average (USBR-SLDMWA 11/12/97). The principal differences appear to arise from (1) evolving knowledge as to the project's geohydrologic characteristics, (2) the assumed source and availability of "put" water, and (3) varying "put-take" assumptions. The current USBR proposal is based on an assumed average annual yield of approximately 70,000 AF/year based, it appears, on a put-take scenario that

optimizes year-to-year operations in favor of average annual supply (i.e., high put-take cycling) as opposed to maximum critical period yield (put-and-save cycling). This helps to minimize allocated costs on a per AF basis, but also results in a minimum critical period reliability benefit.

#### Initial List of Questions/Problems

The above summary, and the circumstances under which the USBR "fast-track" proposal is being made, result in a long list of substantive, financial, and procedural concerns that need to be addressed. Among them (in somewhat random order) are the following:

1. Why are the Integration Panel, the Ecosystem Roundtable, CALFED, and other involved interests being asked to make an "emergency" funding decision for a project that, according to USBR, "has been around" since at least 1995?
2. What parallel up-front commitments (financial or otherwise) have been or are being made by SLDMWA or other possible cost-sharing partners as part of the current proposal?
3. Why was the Ecosystem Roundtable and/or its Integration Panel not informed of the USBR-SLDMWA "partnership" when it was first established in November 1997?
4. Why was no proposal or inquiry proposal submitted or even discussed in advance of the current "emergency" request? Why is this being handled as an "emergency" today when it has been under detailed scrutiny with the Bureau of Reclamation for close to a year?
5. Why were CVPIA "b(1) other" funds (i.e., Restoration Funds allocated to the alleged purpose mitigation for "other" CVP impacts) not budgeted, set aside, or otherwise re-programmed, in whole or in part, for such an "urgent" purpose?
6. Why was there no effort by USBR or others to "coordinate" this proposal with related (or potentially more appropriate) CVPIA programs in FY98 or FY99 (e.g., "other" CVP impacts, water acquisition/land retirement, etc.)?
7. Why does the current (9/23/98) proposed re-work of the CVPIA implementation budget for FY99 (~\$97.6m from the CVP Restoration Fund, federal Water and Related Resources accounts, and State of California cost-sharing) include no proposed allocation for this seemingly urgent project?
8. Does a written purchase agreement currently exist? If so, what does it say? If not, what assurance is there that the "deal" will be implemented as proposed?
9. What is the appraised fair market value of the property? How can CALFED, the United States, or other participants justify paying significantly more (\$20m? more?) than fair market value based on its assumed value as part of the groundwater bank, when no assurance can be given that the bank will work, how it will work, etc??

10. If the seller's current "offer" is \$50m, how will the \$10m "premium" acknowledged in the USBR proposal ? an amount which may or may not be paid by SLDMWA -- be handled? Will the seller retain title to the property unless/until the full amount has been paid and, if so, subject to what contingencies? Are any other fees, commissions, holding costs, etc. also involved? Are they based upon fair market value, actual sale price, or what?

11. When will the \$8m in grants and \$17.5m in loans assumed to be part of the current proposed \$40m "package" be finalized?

12. Who will hold title to the property if/when a final purchase is completed? Who will take long term title? How will the project be managed? By whom? For what purpose?

13. Who will pay/secure annual interest on a \$17.5m loan (= \$525,000/year @ 3%, \$1.05m @ 6%, etc.)? What are the other relevant terms (deferral period, number of years, interest/principal mix, interest rate, ec.)? Who will repay the principal? What is the total annual repayment obligation proposed to be incurred? What revenue source will be used to assure repayment? What won't be funded as a consequence? What if the project doesn't work out (as planned or at all)?

14. Will the proposed use of ecosystem water acquisition reserve funds preclude other high-priority FY99 water acquisition opportunities (e.g., the \$20-30m estimated cost of implementing the evolving Battle Creek restoration plan)? How do the prospective ecological priorities measure up ? i.e., where are we likely to get "the biggest ecological bang for the buck" as between these two projects or others?

15. How does Madera Ranch compare to other possible groundwater storage projects? (See, e.g., EDF letter to Cindy Darling and Kate Hansel dated 12/2/97, raising many similar concerns to those now at issue here in conjunction with a proposed \$15m earmark of Bay-Delta Act funds early in FY98 to establish a "near-term water acquisition reserve" within the Kern Water Bank)

16. Assuming that ecosystem "benefits" net of ecosystem depletions can be measured and assured, how should/will they be optimized?

17. Are water quality issues of any concern, e.g., the proposed use of pumped groundwater as a direct source for supplementing instream flows on the SJ River?

18. How will the legitimate concerns of overlying and/or neighboring landowners be addressed?

19. How will it be assured that water "put" into the proposed groundwater bank will be available for the purposes intended, when needed? (Note that the groundwater bank "opportunity" is derived at least in part from overdraft of the underlying aquifer to date. In addition, the USBR Phase 1 report concedes that "put" water will migrate beyond the boundaries of the ranch.)

20. Will benefits likely to be enjoyed by surrounding landowners/pumpers (e.g., lower pumping costs due to increased regional groundwater levels) be accompanied by any commensurate compensation for benefits received?

21. Have percolation/aquifer tests yielded any concerns or inconsistencies to date? Will the "aquitard" which apparently separates the upper and lower aquifers underneath the Ranch present problems in terms of the proposed percolation, lateral migration, and/or secure availability of "put" water?

22. Do any rights exist to appropriate San Joaquin River flood flows and/or other so-called "surplus" water in the Delta? Are there any conflicting claims to this water and, assuming so, has any effort been made to account for them? Will the public be compensated for the "rental" of any such newly appropriated water (which it owns), at least for that portion intended to benefit consumptive users?

23. Do the increased DMC exports assumed by USBR modeling ("25,000 AF in Dec-Jan-Feb unless flood control release water avail") conflict with other efforts to protect/conserves/recover listed aquatic species?

24. Why is there no discussion of/requirement for "market based" purchases, the dedication of some portion of annual allocations, etc. -- i.e., source water alternatives that would not result in increased baseline exports, that would avoid the need for new appropriations from an already over-appropriated system, etc.?

25. Why is there no link proposed to the CVPIA land retirement program -- e.g., where "put" water was based on/limited to all or part of the water allocations derived from land retirement purchases?

26. How would the proposal "rank" if scored on the basis of the scientific priorities established by the Integration Panel/Ecosystem Roundtable in FY98 and/or FY99? How does it comport with the evolving ERPP or its strategic plan?

27. What does FWS think about the importance/priority of the Madera Ranch (up)lands in terms of special status terrestrial species or other species of concern? Have their views been documented? What kind of habitat assessment has been undertaken/completed to-date? Are the results available?

28. Does the value of the Madera Ranch uplands depend, for example, on the eventual acquisition of neighboring lands to provide, e.g., a river-upland corridor as opposed an upland habitat "island?" If neighboring lands do not become available, how will the value of the Madera Ranch uplands be affected?

29. To what extent will the construction/operation of project facilities conflict with maintenance/preservation of the above habitat values?

30. How will the alleged ecosystem "benefits" of banked water be assured when there is no definitive baseline against which such benefits might be measured?

31. Will the project be operated with an "annual" or "critical period" priority?

32. What are the projected costs of environmental compliance, permitting, mitigation, etc.? Are they included in or in addition to the above "total cost" estimates?

33. What is the Madera Ranch Oversight Committee? Who belongs to this group? When was it formed? Has USBR been involved in any way?

34. Above all, is the fundamental purpose of the proposed project (1) ecosystem restoration, (2) consumptive water supply, or (3) other? how can we be sure??

35. How much has USBR spent on the Madera Ranch project to date? Where have these funds come from? When did those expenditures begin? How will such costs be allocated, repaid, or otherwise handled as part of the proposed project financing?

#### REFERENCES (partial list)

8/96 Bookman-Edmonston report (as "unpublished work"), Madera Ranch Groundwater Banking Project

9/15/97 Letter from CDFG (George D. Nokes, Regional Manager) to Marc Reisner (Comments: Proposed Madera Ranch Groundwater Banking Program)

11/24/97 Joint letter from Roger Patterson (USBR) and Dan Nelson (SLDMWA) to Mr. Heber D. Perrett (proposed letter of agreement re. Phase 1 activities)

~2/2/98 Madera Ranch: Environmentally Benign Water Storage at Reasonable Cost (distributed by Jeff Jaraczeski, "project attorney")

2/98 Bookman-Edmonston report (as "unpublished work"), Results of Geologic and Hydrologic Testing Program for the Madera Ranch Groundwater Banking Project

5/28/98 USBR Memorandum (Richard Whitson, Project Manager), Madera Ranch Groundwater Bank Phase 1 Report

7/17/98 "Blue Envelope" Memo from Marc Reisner to Roger Patterson (USBR), Dan Nelson (SLDMWA), and Nelson Matthews (TPL)

8/24/98 USBR "Information Packet for Integration Panel"

8/31/98 email from EDF analyst Spreck Rosekrans: "latest DWR modeling shows yield for Madera to be 10 TAF average, 60 TAF dry period (28-34) ? obviously the average could ? be increased at the expense of the dry period, as will be acknowledged in the NNG report)

8/31/98 Roundtable agenda item (RT packet included copies of 8/24/98 IP information packet and 5/28/98 Phase 1 report) -- briefing/discussion deferred to 9/21/98 meeting

9/4/98 Memo from Roger Patterson to Lester Snow re: Partial Funding for the Madera Ranch Groundwater Banking Project (USBR Proposal)

9/10/98 Memo from Lester Snow to CALFD Policy Group re. Madera Ranch (conveying Patterson's 9/4/98 memo and proposing that the USBR Proposal be handled as a "Concurrence Item"

9/10/98 USBR (Walthall) Stockton p.m. briefing on USBR Proposal

9/14/98 Rec'd copy of 9/4/98 USBR Proposal, 9/10/98 Snow memo, and 2/98 B-E report

9/21 Roundtable agenda item

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