



United States Department of the Interior

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MEMORANDUM

Thru: Randall Peterson, Bureau of Reclamation, UC-700
To: Budget Officer, Bureau of Reclamation, Upper Colorado Region
From: Barry Gold, Chief, GCMRC
Subject: Request for Carry-Over Funds from FY-2001 to FY-2002

This is a request to carry-over funds from FY-2001 to FY-2002. Consistent with the Protocols developed by GCMRC and the Bureau of Reclamation these carry-over requests are for (1) work planned but not accomplished during the current budget year, and (2) for projects recommended by the AMWG for implementation in FY-2002 that will not otherwise be funded given the lack of appropriations.

As you will recall, we learned about 4 months into FY 2001 that our request for appropriations in FY 2002 was not contained in the President's budget. Therefore, I instructed GCMRC Program Managers to be diligent about their expenditure of funds in FY 2001 and to consider the needs they may have for high-priority activities in FY 2002. I believe this prudent approach to planning, especially while we were working to make changes in program activities in response to PEP panel recommendations partially contributes to the amount of carry-over being requested.

The total carry-over request is \$1,116,000. The details of where these funds come from in the FY-2001 budget and why they are available for carry-over are shown in Table 1. In addition, Table 1 contains a justification for carrying funds over to support work planned but not accomplished in the current budget year. Table 2 contains a justification for carrying funds over to support projects recommended by the AMWG for implementation in FY-2002 that will not otherwise be funded given the failure to obtain appropriations.

TABLE 1. SOURCE OF FUNDING AND JUSTIFICATION FOR CARRY-OVER	AVAILABLE FUNDS	CARRY-OVER AMOUNT
<p>A. Administrative Management and Operations (\$195,000)</p> <ul style="list-style-type: none"> - <u>Administrative Support.</u> Less funds were required in FY-01 than were budgeted because the USGS Biological Resources discipline funded GCMRC administrative support costs, as part of the transition from BOR to USGS. - <u>Other operating expenses (travel, training, space, supplies).</u> Less funds were required in FY-01 due to staffing set-backs related to the hiring freeze. GCMRC operated with less than a full staff in FY-01. <p><u>Purpose and Justification of Carry-Over Funds:</u></p> <ul style="list-style-type: none"> - <u>FY-2002 Science Projects (see Table 2).</u> Science projects recommended by the AMWG for implementation in FY-02 that will not otherwise be funded given the lack of appropriations. 	<p>\$146,000</p> <p>49,000</p>	<p>\$195,000</p>
<p>B. Information Technologies (\$94,000)</p> <ul style="list-style-type: none"> - <u>Oracle Support.</u> These funds are available for carry-over as a result of the delay in finalizing an Oracle support contract. - <u>Library.</u> These funds were planned to be carried over and combined with additional FY-02 funds to cover the total cost of a scanner estimated at \$24,000 to support the scanning pilot project described below. - <u>Web Contract.</u> These funds were not expended in FY-01 as GCMRC did not have a contract to maintain the Web-site. This activity was maintained in-house at a lower level than desired. GCMRC is currently re-evaluating the need for a Web contract since filling the systems administrator position. It is possible that GCMRC will no longer need this contract if the system administrator can perform this activity. <p><u>Purpose and Justification of Carry-Over Funds:</u></p> <ul style="list-style-type: none"> - <u>Oracle Support.</u> A contract was finalized in June for the amount of \$338,475. Of this amount, only \$267,950 was obligated. \$70,000 will be required to fund the option period and complete the project. 	<p>70,000</p> <p>11,000</p> <p>13,000</p>	<p>70,000</p>

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<p>- <u>Library Scanning Work</u>. During FY-02, the GCMRC Library intends to complete a pilot project to scan negatives of historic aerial photos and convert them to digital format. This will allow change detection to be conducted in a more accurate and efficient manner and a wider distribution and preservation of the originals. The bulk of the cost of this project is the purchase of an appropriate scanner that would then be used in subsequent years to scan the entire collection (approximately 26,000 images). The minimum requirements for a scanner to complete this process include:</p> <ul style="list-style-type: none"> • Scanning at a minimum true resolution of 2,117 dpi (12 microns/pixel) • Ability to scan 9" x 9" media • Scan at least in 8 bit • Able to scan hardcopy and transparencies in color and B X W. <p>The large size of products as well as the specification to scan both hardcopy photographs and negatives increases the cost of the scanner as well as reduces the number of scanner choices available. The Afga T500 Plus meets the specified criteria and costs \$22,500. The cost of DVD media for this project is approximately \$1,500 (100 DVDs @\$15 each). Only \$12,000 was budgeted for this project in FY-02, therefore, the FY-01 carry over funds are needed to support the pilot project.</p>		12,000
<p>- <u>FY-2002 Science Projects (see Table 2)</u>. Science projects recommended by the AMWG for implementation in FY-02 that will not otherwise be funded given the lack of appropriations.</p>		12,000

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<p>C. Tribal Outreach (\$35,000)</p> <ul style="list-style-type: none"> - <u>Cultural Activities</u>. The Southern Paiute Consortium (SPC) submitted an unsolicited proposal in FY-01 for \$32,000. The proposal was received too late to complete the review and award process in FY-01. The proposal is currently out for external peer review and if it receives favorable reviews it will be awarded in FY-02. <p><u>Purpose and Justification of Carry-Over Funds:</u></p> <ul style="list-style-type: none"> - <u>Southern Paiute Consortium Proposal</u>. The SPC has successfully submitted education outreach proposals in the past and provided the AMP with an important tribal perspective on cultural resources. It is anticipated that the external review will recommend funding this project and these funds will be needed in FY-02 to support this project. Funding for this project was not otherwise included in the FY-02 budget. - <u>FY-02 Science Projects (see Table 2)</u>. Science projects recommended by the AMWG for implementation in FY-02 that will not otherwise be funded given the lack of appropriations. 	<p>35,000</p>	<p>32,000</p> <p>3,000</p>
<p>D. Independent Reviews (\$75,000)</p> <ul style="list-style-type: none"> - <u>Science Advisors and Proposal Reviews</u>. The Science Advisor contracts were finalized half-way through the fiscal in April. This resulted in less funding being required to support the Science Advisors than will be needed for a full fiscal year of activities. Reviews of technical reports were less than anticipated in FY-01 and no in-house proposals were submitted this year so their review was not needed. <p><u>Purpose and Justification of Carry-Over Funds</u></p> <ul style="list-style-type: none"> - <u>FY-02 Science Projects (see Table 2)</u>. Science projects recommended by the AMWG for implementation in FY-02 that will not otherwise be funded given the lack of appropriations. 	<p>75,000</p>	<p>75,000</p>

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<p>E. Logistics (\$20,000)</p> <ul style="list-style-type: none"> - <u>Capital Equipment</u>. The requisition process for purchase of equipment was initiated in FY-01 however due to delays in receiving necessary information from suppliers the purchase will be carried over to FY-02. <p><u>Purpose and Justification of Carry-Over Funds</u></p> <ul style="list-style-type: none"> - <u>Capital Equipment</u>. The GCMRC Logistics Program will use the carry-over funds for capital replacement of equipment necessary for support of research river trips. These purchases were originally planned for FY-01. These funds will be used to purchase (4) 18' inflatable boats to replace existing boats no longer in serviceable condition. The approximate cost per boat, including outfitting with necessary auxillary equipment, is \$5,000.00 per boat. 	20,000	20,000
<p>F. Terrestrial Monitoring</p> <ul style="list-style-type: none"> - <u>Tribal Participation</u>. This funding was originally intended to support tribal participation at a terrestrial monitoring workshop in FY-01. Scheduling of the workshop was contingent on monitoring trips and data collection that was delayed in the Spring of 2001. The workshop has been postponed until FY-02. <p><u>Purpose and Justification of Carry-Over Funds</u></p> <ul style="list-style-type: none"> - <u>FY-02 Science Projects (see Table 2)</u>. Science projects recommended by the AMWG for implementation in FY-02 that will not otherwise be funded given the lack of appropriations. 	9,000	9,000
<p>G. Aquatic Ecosystems (\$82,000)</p> <ul style="list-style-type: none"> - <u>Downstream Fish Contracts Balance</u>. Unspent funds in programs associated with downstream fish. These funds result from conserving expenditures in FY-01 in anticipation that the request for appropriated funds in FY-02 might not be approved, and in light of additional work anticipated in FY-02. The biology program thus reserved a portion of the FY-01 downstream fish funds to carry forward into FY-02 to 	72,000	

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<p>supplement additional fisheries work in FY-02 as data from new monitoring strategies was developed. The money reserved will cover needed downstream fish trips and subsequent data analysis. See additional discussion associated with Table 2.2, page 10.</p> <p>- IWQP funds for carry-over result from proposed equipment expenditures and research activities that were not accomplished in FY-01.</p> <p><u>Purpose and Justification of Carry-Over Funds:</u></p> <p>- <u>Integrated Water Quality Monitoring.</u> The IWQP PEP review recommended; (1) an evaluation of current methods relative to new technologies, (2) a move from data collection to model development, and (3) expanded efforts downstream. In FY-01, \$20K was charged by BOR for LP work including CEQUAL modeling. These funds are being proposed for carry-over to support the CEQUAL modeling effort which we believe will entail much more effort and detail than currently exists. These funds might be used to support a student contract to organize and process the needed data or to examine other water quality modeling systems.</p> <p>- <u>FY-02 Science Projects (see Table 2).</u> Science projects recommended by the AMWG for implementation in FY-2002 that will not otherwise be funded given the lack of appropriations.</p>	<p>10,000</p> <p>10,000</p> <p>72,000</p>	<p></p> <p>10,000</p> <p>72,000</p>
<p>H. Integrated Terrestrial and Aquatic Ecosystem (\$281,000)</p> <p>- <u>Bathymetric Contract.</u> These funds result from the fact that the contracting process could not be completed in FY-01. It is expected that the contract should be awarded in the 1st quarter of FY-02.</p> <p>- <u>Streamflow and Fine-Sediment Transport.</u> See description under "G. Aquatic Ecosystems, Downstream Fish Contracts Balance."</p> <p>- <u>Modeling Reach Averaged & 1 Dimensional.</u> This project was originally scheduled to begin in 2001, but award of the project was delayed owing to the need to readvertise to obtain full and open competition. The second round of the</p>	<p>30,000</p> <p>46,000</p> <p>200,000</p>	<p></p> <p></p> <p></p>

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<p>competitive proposal development and external review process lasted well into September, delaying the final selection process beyond the normal fiscal deadlines for year-end procurements. As a result, the funds for this project need to be carried over for the award to be made early in FY-02.</p> <ul style="list-style-type: none"> - <u>Streamflow & Fine-Sediment Transport.</u> These funds are required to complete FY-01 work on the Bridge Canyon damsite resurvey described in the workplan for the 5-year fine-grained sediment monitoring project headed by David M. Rubin. This work was unable to be completed in FY-01. 	7,000	
<p><u>Purpose and Justification of Carry-Over Funds:</u></p>		
<ul style="list-style-type: none"> - <u>Bathymetric Contract.</u> Funds to support the bathymetric component of the sand-storage change detection monitoring project need to be carried over to coincide with the biennial schedule of reach integrated monitoring. Changing the sampling frequency for this project from annual to biennial has forced the GCMRC to carry over the FY-01 funds for supporting the multi-beam hydrography (30K) to FY-02, and add them to the FY-02 project budget. 		30,000
<ul style="list-style-type: none"> - <u>IWQP Model Development.</u> These funds are being proposed for carry-over to support the CEQUAL modeling effort which we believe will entail much more effort and detail than currently exists. These funds might be used to support a student contract to organize and process the needed data or to examine other water quality modeling systems. They might also be used to evaluate new data collection methods (i.e., Seabird) compared to existing data collection. These funds will be combined with the \$10,000 proposed for carry-over under G, above, to yield a total carry-over of \$30,000. 		20,000
<ul style="list-style-type: none"> - <u>Modeling Reach Averaged & 1 Dimensional.</u> Work planned in FY-01. Contract pending award. 		200,000
<ul style="list-style-type: none"> - <u>Fine-Grained Sediment Monitoring.</u> Funds are needed to complete project work related to Bridge Canyon damsite resurvey. 		7,000
<ul style="list-style-type: none"> - <u>FY-02 Science Projects (see Table 2).</u> Science projects recommended by the AMWG for implementation in FY-02 that will not otherwise be funded given the lack of appropriations. 		26,000

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<p>I. Protocol Evaluation (\$118,000)</p> <ul style="list-style-type: none"> - <u>Aquatic & Native Fish PEP Balance.</u> These savings resulted from combining the aquatic foodbase and native fish PEP panels into one. 63,000 - <u>Socio-Cultural PEP Implementation.</u> A workshop to provide direction on the scale and level of effort needed to obtain information in the area of geomorphology was planned for FY-01. The workshop has been delayed and the funds have not been spent. Funds were also proposed for additional efforts to assist the completion of the Historic Preservation Plan, the number one recommendation from the PEP report. Due to extended negotiations, the contract for the research design for the HPP has just been awarded. As a result, expenditure of funds that may have assisted with the HPP effort has also been delayed. 55,000 <p><u>Purpose and Justification of Carry-Over Funds:</u></p> <ul style="list-style-type: none"> - <u>FY-02 Science Projects (see Table 2).</u> Science projects recommended by the AMWG for implementation in FY-02 that will not otherwise be funded given the lack of appropriations. 118,000 		
<p>J. Other Research Activities (\$205,000)</p> <ul style="list-style-type: none"> - <u>Unsolicited Proposals - Cultural.</u> No unsolicited tribal proposals were received in FY-01. Therefore, these funds are available to be carried-over into FY-02. 32,000 - <u>Unsolicited Proposals – Biology and In-House Research.</u> The monies remaining in these line items result from the fact that the Biology Program did not receive any unsolicited proposals in FY-01 that were judged to be worth funding. In addition, in-house research money was not obligated because there were no independent projects initiated that requested funds. Finally, the Chief advised that these funds be held for carry-over into FY-02 given the low probability of obtaining the requested appropriated funds. 78,000 		

TABLE 1. SOURCE OF FUNDING AND JUSTIFICATION FOR CARRY-OVER	AVAILABLE FUNDS	CARRY-OVER AMOUNT
<ul style="list-style-type: none"> - <u>AMWG/TWG Requests.</u> In FY 2001 there were no AMWG/TWG requests that required GCMRC to enter into supplemental contracts or expend these funds. 	56,000	
<ul style="list-style-type: none"> - <u>LSSF Science Symposium and Papers.</u> The LSSF science symposium was less expensive the originally budgeted owing to the fact that we did not have to pay as much in the way of travel expenses for principal investigators who came to make presentations. In addition, the cost for renting the meeting space was less then anticipated. Given the nature of the information presented at the LSSF symposium, a decision was made to reproduce the individual power point presentations on a single CD and distribute them to the participants as compared to the original idea of producing an edited volume of contributed papers. Therefore publication costs were also significantly reduced. 	39,000	
<p><u>Purpose and Justification of Carry-Over Funds:</u></p>		
<ul style="list-style-type: none"> - <u>Tribal Integration and Western Science Perspectives.</u> This is an unsolicited proposal that will be implemented by the Hopi Tribe. The cost of this workshop is expected to be \$20,000. The delay in funding this project has been the development of scope of work and crafting a funding instrument that will minimize indirect tribal costs and allow the maximum funding to be spent on direct workshop costs. This project will be implemented by Spring 2002. 		20,000
<ul style="list-style-type: none"> - <u>FY-02 Science Projects (see Table 2).</u> Science projects recommended by the AMWG for implementation in FY-2002 that will not otherwise be funded given the lack of appropriations. 		185,000
TOTAL CARRY-OVER REQUEST	1,116,000	1,116,000

TABLE 2. PROPOSED FY-02 SCIENCE PROJECTS	AMOUNT
<p>1. <u>Terrestrial Habitat Map and Inventory</u></p> <p>The recommendations from the terrestrial PEP panel which the GCMRC biology program supports include expanding vegetation surveys to areas that include channel margins, to conduct corridor-wide inventories to provide a baseline for establishing minimum sample numbers for monitoring, and to develop a corridor-wide, GIS-based, community and habitat map. Current funding levels in the terrestrial ecosystem project are being used to accomplish the inventory and expand vegetation measurement, but not to construct the corridor-wide, GIS-based community and habitat map. All of these activities are not single year efforts. For example, inventory is not a single-year activity, but will likely take 2-3 years given the logistics and current funding levels. Both activities are of equal importance and in fact support each other in that as data are gathered in association with local inventories, these sites and their attributes can be incorporated into the GIS-based community and habitat map. Map development and integration with terrestrial surveys includes support for necessary overflights, ground-truthing habitat designations as well as development of equipment that can utilize GPS/GIS technology in the field for data entry/retrieval and data management. These elements are estimated to cost the additional \$200,000 requested.</p>	<p>\$200,000</p>
<p>2. <u>Monitoring of the Status and Trends of Downstream Fish Community</u></p> <p>Several management actions are underway or being considered to benefit native fish. Analysis of the historic data indicates that several elements need to be added to downstream fish monitoring efforts in order to adequately characterize the effects of management actions on native fish. Primary among these is a determination of the sampling effort needed to develop population estimates and characterize population shifts for exotic fish (rainbow trout, brown trout, carp, catfish, stripers).</p> <p>These elements involve increasing: PIT tagging efforts for fish in the LCR and mainstem, sampling area, and sampling of prey-types in stomachs. Current contract costs associated with monitoring is \$480,000 (includes \$9K for PIT tags). These costs covered 3 mainstem and 4 LCR trips in FY-01, plus additional analysis of historic data. The additional funds requested will be used to cover the existing FY-01 sampling program plus an additional 2-3 mainstem trips that are needed to determine distribution and population estimates for flannelmouth suckers, humpback chub, rainbow and brown trout and to begin these efforts for bluehead suckers, carp and catfish.</p>	<p>200,000</p>

TABLE 2. PROPOSED FY-02 SCIENCE PROJECTS	AMOUNT
<p>We estimate that each mainstem trip costs between \$60-70K per trip. This includes equipment purchases (nets, PIT tags, scales) and technologies that will facilitate quicker data entry, analysis and data management, as well as the subsequent analysis and reporting costs.</p> <p>The \$200,000 that is proposed to be added to the downstream fish budget in FY-02 will cover the costs for these additional mainstem trips, equipment, and the subsequent data analysis and reporting. The total budget figure for downstream fish monitoring in FY-02 would be \$873K. This includes GCMRC salary, logistics, and survey costs. We are hopeful that the costs for FY-03 will be slightly less because historic data analysis will be largely completed, hence the \$760,000 figure proposed for FY-03.</p>	
<p>3. <u>New Research Associated Interrelationships between Native and Non-Native Fish</u></p> <p>Predation on native fish is thought to be a problem in the CRE. Warming of water either through steady flows or by warm water withdrawal may also benefit warm water predators as well as increase the metabolism of cold water predators. Funding to understand the predator-prey and competitive interactions between native and non-native fish is imperative to determine the benefits of the management actions on native fish and predator control effectiveness.</p> <p>4. <u>Survey Services</u></p> <p>a. <u>Provide survey, control, and GPS support to monitoring programs and remote sensing activities.</u> Survey operations support GCMRC monitoring programs and remote sensing activities in the form of providing control and GPS base station data. Data provided from these activities is crucial to the geo-positioning and rectification of remotely sensed data collected and is fundamental to the application of remote sensing technologies for monitoring programs in the CRE. Updating and completing the control network is critical to a number of ongoing biological, cultural, and physical monitoring resource projects.</p> <p>b. <u>Complete organization of legacy data.</u> The IT program inherited large amounts of legacy survey data pertaining to CRE resources. This data is valuable in developing baseline information and for change detection relative to this historic data. This information is being inventoried, described, and translated into modern data systems. Survey operations will complete this activity in FY-02.</p>	<p>110,000</p> <p>50,000</p>

TABLE 2. PROPOSED FY-02 SCIENCE PROJECTS	AMOUNT
<p>5. <u>Aerial Photography</u></p> <p>Aerial photography supports the monitoring of multiple resources in the Colorado River ecosystem. In FY-02 GCMRC will collect digital color infrared aerial photography with a ground resolution of 20 cm in support of terrestrial monitoring activities. GCMRC will collect aerial photography on an annual basis to maintain a continuous photographic record of the Canyon started in 1990. The need for collecting annual aerial photography or LIDAR will be reevaluated after FY-02 as part of the remote sensing initiative.</p>	<p>135,000</p>
<p>TOTAL PROPOSED SCIENCE PROJECTS</p>	<p>695,000</p>