How to Prepare a Budget Narrative / Budget Justification

The budget narrative, sometimes called the budget justification, is a companion to the budget (table, spreadsheet, or forms). While the budget table gives the total cost for each category of the budget, the budget narrative gives the item by item breakdown for each category and shows the calculations used to derive the costs. The budget narrative serves two purposes: it explains how the costs were estimated, and it justifies the need for the cost. From a funder's perspective, the budget narrative explains how you will spend its investment and shows that you did your research to ensure that the project costs are reasonable and well thought out.

Format and Structure:

- **Read the solicitation for the required format.** The funder may request that you attach the budget narrative as a supplemental document or that you include it as part of the body of the proposal. The solicitation may also list the budget categories to be used.
- Present the budget justification in a format that allows a reader to easily assess
 the costs in relation to the budget. For instance, if the required budget uses headers
 such as salaries, fringe benefits, and travel, be certain to use the same headers in the
 budget justification. This will allow readers to quickly skim the budget and the budget
 narrative to find specific items of cost.
- Choose a presentation format that fits the needs of the proposal. The format of the budget narrative may be entirely narrative text, a combination of narrative text and accompanying tables, or one-line item table with text explanations in the table (see examples on subsequent pages). For simple projects, typical of proposals to foundations and private corporations, an option is to fold the budget narrative into the budget, inserting a brief explanation under each item.

General Requirements:

- The budget narrative must conform to the funder's specifications. Read the solicitation for budget constraints and any unacceptable costs.
- The budget narrative should breakdown costs for each of the major cost categories (ie., salaries, fringe benefits, equipment, travel, supplies, other direct costs and indirect costs), as well as any additional categories required by the sponsor.
- Describe each line item in the budget and show the calculations used to derive the costs. The information should be sufficiently detailed to address all sponsor concerns with respect to cost and need. If you don't know, talk with others who have done similar projects. Make a plan of how many hours of work will be needed to accomplish a task. Research the cost of equipment, supplies, and other expenses.
- Expenses should be justified in the context of the proposal. Take care to explain any costs that may be unclear or that may raise questions with the reviewer. For staff positions, explain what the person in that position will do for the project. For equipment, explain why it is needed and why your choice is better than other, perhaps less expensive, options. For activities to be funded, explain why they will benefit participants and contribute to the project objectives. Explain and justify any unusual items.
- Justify the use of consultants and subcontractors. Explain what these individuals or
 organizations will do and why their work is necessary. They may need a separate budget.
- **Explain how indirect costs were calculated.** UVU's indirect cost rate calculation (currently 38% of salaries, wages and fringe benefits).
- Each item must correlate to specific activities described in the body of the proposal. No costs should be included in the budget narrative that were not described in the proposal, and vice versa.

Tips:

- **Show your work.** Reviewers and sponsor administrators should be able to determine how you arrived at your budget figures.
- The budget justification serves as the rationale for your costs. Be certain to tie each cost to the overall project so that readers understand the importance of each cost/item to the overall project.
- If (and only if) matching costs or leveraged resources are required, explain where these funds or resources will come from. Make certain the budget narrative clearly shows which budget items will be covered by matching funds or leveraged resources and which items by the requested budget. Have another person review this for clarity.
- **Keep your back-up documentation.** Sponsors may request estimates for equipment and other major purchases during a pre-award audit.
- Make sure the cumulative totals for each category must correlate with the budget tables. If you make changes to the budget, be sure to change the budget narrative as well.
- Take time to read the budget, budget justification, and narrative. Do all of the expenses in the budget appear in the budget justification? Do the budget, budget justification, and proposal narrative all align?

Do not:

- Do not list costs that are not being requested for funding, such as costs covered by the university or a partner. For example, some proposers mention in the budget narrative that additional effort not listed in the budget will be provided. In other cases, they indicate that the funds requested are insufficient for the proposed activities and will be supplemented from other sources. This is considered a cost-sharing commitment, and is not generally allowed. At UVU, cost share is only allowed if it is required by the sponsor and approved by the University. Cost sharing is also not allowed by some funders, such as NSF. Please consult with OSP Director of Sponsored Research.
- **Don't give broad estimates of cost**, such as \$3,000 for travel, \$1,000 for supplies, \$5,000 for student assistants. Break down and itemize the costs. Explain who will be traveling and where, how much for air travel, ground transportation, hotel, and per diem. Give a specific accounting of the kinds and quantities of supplies needed. Detail how many student workers, how many hours per week, how many weeks, how much wage per hour.
- **Don't pad the budget so you will be sure to have enough money.** Reviewers know a padded budget when they see one and often use this as a reason to decline a proposal.
- Don't assume the reader will understand why a cost is necessary or important. Anticipate the reviewer's questions and provide detailed answers.
- **Do not wait until the last minute to complete the budget narrative.** This section takes time and effort. It is best to complete it hand-in-hand with the budget.

Remember:

The budget narrative is a vital part of the proposal and is critical in the proposal review process. Often the reviewers and program officers are not the only ones reading the budget justification. If a proposal is recommended for funding, many sponsors send the proposal to pre-award auditors who scrutinize the budget carefully and do not allow vague, unjustified budget items. Providing as much detail as possible in the budget justification during the submission phase will facilitate a faster pre-award audit and may avoid having the proposal declined.

Full budget narrative for the first year of a four-year grant. Only the first year is required for this budget narrative. The budget narrative appears on two pages within the proposal narrative. Explanations are given for each line item within the table. Budget forms are also required separately.

Wee Care Center CCAMPIS Budget Narrative - Year 1				
Category / Explanation	Amount			
1. PERSONNEL				
CCAMPIS Coordinator (part-time) – Coordination of grant project budget, reporting, daytime and evening educational and activity curriculum, health and safety coordinator, and other duties as assigned. \$13.67/hr for 28 hours per week x 48 weeks per year.	\$	18,372		
Program Teachers (full-time) (2) — Responsible for direct child care and supervision, and implementation of educational and activity curriculum. Base salary estimated at \$15.46/hr at 2,080 hours annually x 2 teachers.	\$	64,314		
Total Personnel	\$	82,686		
FRINGE BENEFITS – Benefits at UVU are calculated using actual costs for each position.				
CCAMPIS Coordinator – Part-time/hourly = 8% of base salary	\$	1,470		
Program Teachers – Full time (2) = standard benefits (FICA, Workers' Comp, Unemployment) and retirement calculated at 22.9% of base salary + major medical/family coverage of \$21,374 x two teachers.	\$	57,476		
Total Fringe Benefits	\$	58,946		
3. TRAVEL				
Travel for CCAMPIS Director to Washington, D.C. for annual Dept. of 1 training and to one additional professional staff development training Airfare - \$750 participants x 2 trips = \$1,500; Lodging - \$250/night x 3 nights x 2 trips = \$1,500; Per Diem - \$96/day x 4 days x 2 trips = \$768; Ground Transportation - \$100 each x 2 trips = \$200; Conference Fees - \$600 each x 2 trips = \$1,200				
Total Travel	\$	5,168		
4. EQUIPMENT				
There are no equipment costs associated with this project	\$	_		
5. MATERIALS & SUPPLIES				
Curriculum purchase and maintenance agreement. Creative Curriculum®: Infants, Toddlers & Twos @ \$1,150 and Preschool @ \$3,150 in Year 1 and additional curriculum for other ages in subsequent years.	\$	4,300		
Purchase of necessary children's furniture and computers.	\$	3,000		
Postage costs for mailing program brochures, information dissemination, and conducting business - \$25/month x 12 months	\$	300		
Books for staff & parents to use for training and reference - \$600; books & resource materials for children - \$1,200; and professional journals & periodicals for staff continuing education - \$200	\$	2,000		

Brochures - \$1 each x 1,000; other advertising and marketing expenses for print & digital media - \$1,400	\$	2,400
Basic office supplies, classroom teaching and child activity supplies, arts and crafts materials, cleaning supplies, etc \$442/month x 12 months	\$	5,304
Total Materials & Supplies	\$	17,304
6. CONTRACTUAL		
Maintenance by IT staff of Wee Care Center website and database needed to integrate with campus-wide systems for advertising, participant registration, scheduling, and payment - 200 hours at \$50/hr	\$	10,000
Total Contractual	\$	10,000
7. CONSTRUCTION		
There are no equipment purchases associated with this grant project	\$	-
8. OTHER		
Honorarium payments for 3 persistence-themed keynote speakers at Family Fun Fair events $3 \times 1,000$	\$	3,000
Telephone and communication costs: 2 cell phones $x $150/month x 12$ months = \$1,800; and telephone usage - \$50/month $x 12$ months = \$600	\$	4,200
Professional memberships, licenses, and accreditation costs: Utah Association for the Education of Young Children - \$100; Higher Education Association for Single Parent College Students - \$300; Utah State License for Child Care - \$100; National Administrator's Credential - \$100; National Early Childhood Program Accreditation - \$2,700	\$	3,300
Background checks for all workers and associates (board members, student interns, parent workers, etc.): \$52 each x 95 checks	\$	4,940
Food handler's permits for all workers: \$26 each x 50 permits; and CPR training: \$300	\$	1,600
Total Other	\$	17,040
9. TOTAL DIRECT COSTS	\$	191,144
10. TOTAL INDIRECT COSTS – The negotiated indirect rate for UVU has been established with the U.S. Department of Health and Human Services and is 38.0% of all salaries and benefits for the project. However, we intend to claim only 8% as requested by the Department of Education.	\$	15,291
Education.	1	
11. Training Stipends	\$	_

Partial budget justification for a three-year NSF scholarship project. Here tables present costs for budget categories and explanatory text follows. The base salary for faculty is given here as requested, but is not expected or allowed for some proposals. Additional tables are used to present information as well. Travel is broken down by costs and potential locations of conferences are given.

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Budget Justification - 3 Years

Personnel

Table A-C: Personnel	Year 1 4/1/19 –	Year 2 4/1/20 -	Year 3 4/1/21 –	Total
	3/31/20	3/31/21	3/31/22	
A. Senior Personnel (2 summer, part-time	e)			
Faculty – Marie Moreno	6,822	6,614	6,812	20,248
Jeremiah Johnson	4,801	4,383	4,983	14,621
Lawrence Livermore	4,849	5,332	5,492	15,674
Ameeta Adhikari	4,864	5,017	5,167	15,049
Ivan Illich	4,802	5,010	5,160	14,972
Total Senior Personnel	26,139	26,801	27,615	80,564
B. Other Personnel				
Undergraduate Student Researchers	24,960	24,960	24,960	74,880
Undergraduate Near-Peer Mentors	4,800	4,800	4,800	14,000
Total Other Personnel	29,760	29,760	29,760	89,280
C. Fringe Benefits				
- faculty fringe benefits - 22.9%	5,986	6,140	6,324	18,449
- faculty premium contribution - varies	4,293	4,187	4,187	12,668
- student fringe benefits - 8%	2,381	2,381	2,381	7,142
Total Fringe Benefits	12,660	12,707	12,892	38,136
Total Salaries, Wages & Fringe Benefits	68,588	69,278	70,267	208,103

A. Senior Personnel

Faculty will be remunerated during the summer months only. The base salary, percent of effort, and total salary for year one is shown below. The second and third years each include a 3% increase of salary.

Senior Personnel – Year 1 Person	Role on Project	# Summer Months	% of Effort	Base Salary	Salary Requested
Faculty - Marie Moreno	PI	2	40.0%	\$72,235	\$6,822
Jeremiah Johnson	Co-PI	2	30.4%	\$71,064	\$4,801
Lawrence Livermore	Co-PI	2	30.4%	\$71,794	\$4,849
Ameeta Adhikari	Co-PI	2	19.4%	\$112,835	\$4,864
Ivan Illich	Co-PI	2	35.4%	\$61,038	\$4,802
Total					\$26,138

B. Other Personnel

Undergraduate Students Researchers. Twelve (12) paid student researchers will be enrolled annually in the summer research program for a total of 36 students over 3 years. Each student will be paid at a rate of \$13/hour x 20 hours for 8 weeks to equal \$2,080 per summer for the summer research they will be conducting with their faculty mentor.

Undergraduate Students – Near-Peer Mentors. Two near-peer mentors will be hired. Both students will be paid at a rate of \$15/hour x 20 hours for 8 weeks to equal \$2,400 each per summer.

The <u>near-peer laboratory assistant</u> will be an advanced undergraduate student in the geosciences with experience using the laboratory instrumentation required for this project. This person will assist in training research participants in the use of the equipment, supervise the lab, answer questions, and ascertain whether or not the student's projects are moving toward completion in a timely manner.

The <u>near-peer student coordinator</u> will be a senior at UVU or graduate student enrolled in a graduate program in one of the local universities in Utah. This person will assist in coordinating research activities and assist student researchers in preparing for graduate school or job application, including how to apply for graduate programs, writing a successful resume, and other issues related to transitioning.

C. Fringe Benefits

UVU's fringe benefits amounts are based on a percent of direct labor dollars. For full-time employees the rate is 22.9% and 8% for student employees. Costs for the health insurance premium are also included for full-time employees by months worked and family-type policy chosen.

E.1. Domestic Travel (faculty)

Travel funds are for faculty mentors to accompany students to discipline-specific conferences at which they will generally present the research of their teams, and for the project management and research teams to disseminate program results. (Local travel to recruiting events, such as the Utah Conference on Undergraduate Research, will be charged to department accounts or have funding solicited from the College of Science Scholarly Activities Committee.) Faculty mentors will apply to use the S-STEM money for travel to conferences with their students. Faculty will be encouraged to disseminate information about the MORE-BIO at the meeting where possible. Travel funds will be used to support faculty travel to a wide-variety of conferences. The table below gives a sample of conferences that would be attended by members of the project team.

Faculty Member	Conference	2018/19 Location	Faculty Registration	Student Registration
M. Moreno	Mycological Society of America	Athens, GA	\$600	\$360
J. Johnson	Pan American Society for Pigment Cell Research	Portland, OR	\$665	\$365
L. Livermore	American Society for Microbiology Conference (ASM Microbe)	Atlanta, GA	\$590	\$360
A. Adhikari	Experimental Biology	Orlando, FL	\$420	\$20
I. Illich	American Society for Cell Biology	San Diego, CA	\$535	\$100

As an example Dr. Livermore would take her students to the ASM Microbe conference each year. This national conference would provide a platform for students to present their discipline-specific research while also providing Dr. Livermore an opportunity to disseminate insights we gain on faculty mentoring. Cost of travel would include: conference fees (\$590), airfare (\$375), hotel for three nights (\$150 x 3 nights = \$450), food per diem (\$50 x 3 days = \$150), and airport transport (\$100), for a total of \$1,665. Approximately two students would travel with the faculty member (see Student Travel below). By the above calculations, the project would fund about 5-6 faculty conference trips per year at a cost of \$10,000 annually. More trips are likely however. The project team will work to ensure that funding is spent to maximize student benefit and to leverage institutional resources for faculty travel as much as possible.

F-2 Participant Travel (student)

Student scholars are strongly encouraged to do mentored research and present their work at an appropriate conference. An average of one thousand dollars per scholar per year will be allotted for travel. Students will travel to the same conferences as their faculty mentors (see that table in E.1. Domestic Travel). As with the faculty travel, a specific itemization is difficult because scholarship recipients have yet to choose the research programs they will participate, so the conferences and locations cannot be determined now. However, we can estimate that average student travel costs will be \$1,000 per year as in the following example: Travel cost for ASM Microbe would include: conference registration fee (\$360), airfare (\$375), shared hotel cost (\$75/night/student for 3 nights = \$225), shared airport transportation with faculty member (\$0) for a total cost of \$960. Funds not used by one or more of the scholars may be used by other scholars, subject to approval of the program management team. It is likely that 2 or 3 students will travel with a faculty member.

Partial budget justification from an NSF grant for research instrumentation. Notice that the equipment pieces are described as well as their need in the research that was set forth in the proposal. The qualifications and responsibilities of the student equipment manager are also described.

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Budget Justification

A. Senior Personnel - none

B. Other Personnel

Student Equipment Manager and Trainer:

40 wks x 15 hrs/wk x \$14.45/hr = \$8,670

C. Fringe Benefits

7.00% of salary

\$607

Total salary and fringe benefits

\$9,277

Explanation: Qualifications and responsibilities of the Student Equipment Manager and Trainer are described in the table below.

Title:	Student Equipment Manager and Trainer
Qualifications:	 Senior in Psychology or Computer Science Experience with computers; programming experience preferred. Have completed Sensation & Perception and Cognitive Psychology, or, have completed Anatomy & Physiology and The Visual Systems. Research experience—either a research methods course or individual faculty-mentored research; work in a research lab preferred. Ability to work on a team with professionals in various disciplines. Strengths in communication, reliability, and professionalism.
Responsibilities:	 Assist the PI in organizing and managing the schedule of use for the equipment. Be trained by SR Research Ltd., the provider of the EyeLink 1000 Plus System, during their on-site orientation and training visit. Provide training to all faculty and student researchers authorized to use the equipment and will assist with and monitor the use of the equipment. Assist in the use of the Experiment Builder and Data View Software on an ongoing basis.

D. Equipment

EyeLink 1000 Plus with Workstation Host PC and LCD Arm Mount for tracking infants through to adults, and Desktop Mount for use with the head stabilized or free-to-move in Remote Mode. Includes stimulus presentation hardware, experiment builder software, and training and installation visit. The entire system costs \$42,725 and components of the system are separately priced in the table below.

SR Research EyeLink 1000 Plus System* (see attached Vendor Quote)	
EyeLink 1000 Plus Core Unit, High-speed Camera, Host PC/Monitor, Desktop Mount with 890 nm illuminator, Cabling, 24-month warranty, perpetual technical support. As detailed in the Project Description, no comparable eye tracking systems are available on campus or in the region. The research proposed in that section necessitates the use of this equipment. The most stringent	\$26,950

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requirements come from experimental reading research projects. Accuracy for this system is outstanding at 0.25 to 0.5 degrees of visual angle. Sampling rates are up to 2000 Hz, using either monocular or binocular tracking. Such performance will support gaze-contingent displays, such as the boundary technique or the moving window technique (Rayner, 1975). All other projects with fewer demands for display or processing power can also be conducted on this system.

Further, the modularity of the system is desirable as the camera can be interchanged with different illuminators to allow data collection from infants, children, and adults. The system is portable, thus allowing researchers to take it to schools, clinics, or other appropriate data collection locations. All oculomotor research will require the use of a mount for the camera. We have chosen the Desktop and Arm mounts for the reasons described below.

UPGRADES

Desktop Mount for binocular high speed tracking including 890nm illuminator. The mount supports the Remote Camera allowing the head to be free to move. No electronics need to be near the participant's head. It can also be used with the Research Head Support. Most applications of the equipment will require desktop mounting of the camera. The desktop

mount will be most appropriate for experimental reading research, oculomotor development research, and applied research with older children and adults. The desktop mount allows head-supported and support-free tracking. We estimate that 80% of our projects will use the desktop mount.

Arm Mount with a LCD display, including 940 nm illuminator for infant

and non-human tracking. This style of camera mount can accommodate developmentally typical and atypical infants and children. The 940nm illuminator is required to track infants as the shape of their eyes does not respond well to the standard illuminator provided with the core system. In addition to tracking infants, this camera mount will more comfortably address

the needs of children diagnosed with Attention-Deficit/Hyperactivity Disorder (ADHD), who can respond poorly to traditional seating and head supports. Further, this mount is necessary for all non-human research, such as our canine cognition project.

* We have attached a vendor quote for the SR Research EyeLink 1000 Plus System which has been vetted preliminarily through our procurement process. Per UVU purchasing policy, we have also obtained a vendor quote from Tobii for a system that comes closest to being comparable. The Tobii system, however, does not have sufficient resolution for our research (the highest sampling rate is 1200 Hz) and the system is more expensive. In the event of an award, we will continue to follow the institution's approved procurement process before purchasing the equipment from this or another appropriate vendor.

\$3,250

\$2,500

Full budget and budget narrative, provided within the proposal narrative of a small state proposal.

Budget for iUTAH Proposal 2015

Expenses	Laboratory/Vender	Quantity	Price/unit	Total
Analysis of water samples	ICP-OES in Environ. Lab (UVU)	96	\$1.61	\$154.56
Analyses of Water samples (PCB)	Utility Testing Lab (SLC)	96	\$50.00	\$4,800.00
Argon Gas to run ICP	Air Gas (SLC Utah)	6	\$60.00	\$360.00
Nitric Acid (for digestion)	Fisher Scientific	4	\$50.00	\$200.00
Cyclonic Spray Chamber (ICP)	Perkin Elmer	1	\$422.44	\$422.44
Quartz Torch (ICP)	Perkin Elmer	1	\$340.00	\$340.00
ICP Auto sampler tube set	Perkin Elmer	1	\$240.00	\$240.00
ICP Pump tube set	Perkin Elmer	1	\$240.00	\$240.00
Membrane filters	Harrison Inc	2	\$110.00	\$220.00
Filter cups	CEM Corp	2	\$160.00	\$320.00
Nebulizer (ICP)	Perkin Elmer	1	\$400.00	\$400.00
Lab Technician salary & benefits	UVU environmental students	4	\$2,247.00	\$8,988.00
Indirect cost	(38% of salary and benefits)			\$3,415.00
				\$20,000.00

Budget Narrative

Sample Analysis. The cost of analyzing one sample on the ICP-OES (Inductively coupled plasma - optical emission spectrometry) at UVU is estimated at \$1.61 for a total of \$154.56. We will be analyzing the samples in sets of triplicates. Additionally, the entire set samples which totals 96, will be sent to a laboratory in Salt Lake City (Utility Testing Laboratory) for the PCB analysis for a total of \$4800, each PCB sample analyzed will cost \$50. All of the trace metal analysis will be performed at the UVU laboratory which will require the use of a microwave digester (MARS by CEM Corporation) and ICP-OES manufactured by Perkin Elmer. Digestion of the samples require the use of Nitric acid (\$200). To run the samples in the ICP-OES, replacement the purchase of replacement parts are necessary. The parts that will be acquired with the funds include a cyclonic Spray Chamber (\$600), a Quartz torch (\$340), tubes for both the Auto sampler and the ICP; and a nebulizer (\$500). After digestion all samples will be filtered through a .45 micron membrane filter from Harrison Corp (\$220) for plant samples and filter cups (\$320) from CEM Corporation.

Student Lab Technicians. To keep the experiment moving toward completion on a timely bases, four (4) Environmental Management students will be hired. For this project minority students and women will be targeted. Four students will be hired at \$10/hr. for 15 hours per weeks for 14 weeks, plus benefits for part-time workers at 7% of salary, equaling \$2,247 each and totaling \$8,988. All students will be trained in and be expected to assist in all aspects of the project. All students will participate in all aspects of data analysis, giving presentations at professional meetings, and preparing manuscripts for publication. The PI and Co-PIs will not be remunerated for labors performed in this project, but will be actively participating in all aspects of the work giving their input and sharing their expertise wherever necessary to ascertain that the project is completed successfully by the proposed deadline.

Indirect costs are 38% of personnel costs (salary plus benefits), to equal \$3,415.

Partial budget justification submitted as a separate document for an NIH research proposal. In this example, all text is narrative.

BUDGET JUSTIFICATION

A. PERSONNEL

<u>Jane Doe, Ph.D., Principal Investigator</u> (effort = 2.5 calendar months). Dr. Doe will be responsible for the overall coordination and supervision of all aspects of the study. This includes hiring, training, and supervising staff/students; recruiting study participants; coordinating treatment and assessment components; scheduling and staff assignments; and data management. In addition, she will conduct the orientation sessions, assist with statistical analyses, and be responsible for reporting the study's findings.

<u>James Jones, Ph.D., Co-Investigator</u> (effort = 0.8 Academic Months, 1.0 Summer Months). Dr. Jones will be responsible for the collection and analyses of the fecal materials. She will also assist in manuscript preparation.

B. OTHER PERSONNEL

TBA Post Doctoral Associate (effort = 12 Calendar Months effort). This individual will coordinate the day-to-day management of the study, assist in assessments, be responsible for data entry of all treatment-related data (i.e., scheduling and conducting weights, attendance, self-monitoring), and serve as an interventionist.

TBA Project Coordinator effort = (6.0 Calendar Months). This individual will assist with recruitment, assessments, and serve as an interventionist. Additionally this person will aid with preliminary data analyses and manuscript preparation. It is anticipated that this individual would start with 1-year of previous experience.

<u>TBA Research Assistant</u> (effort = 12 Calendar Months). This individual will assist with recruitment, ordering supplies and intervention materials, assessments, collection of dietary data, daily management of study data, and scoring and data entry of assessments.

C. EQUIPMENT

Funds are requested to purchase three Biologs (\$7,150 each). These are ambulatory physiological data recorders with multiple channels that will be used to record mothers' heart rate (RSA), activity level, and electrodermal activity (e.g., skin conductance). Recorded data is compactly stored on a removable memory card. When recording is complete, the card is inserted into a card reader which is connected to a PC through a serial port. The affiliated Downloading and Plotting Software (\$1,100 under supplies) which operates on the PC supervises the downloading of data to the PC and ensures data is recorded according to the needs specified by the researchers. From this program, the data can be converted into separate data files for each physiological measure. These measures are all synchronized with one another and can be synchronized with video files as well. Three Biologs are needed because there are several periods when assessment points overlap (e.g., parental interviews, 6 months laboratory visits, 6 months home visits), and dedicated equipment for each type of visit will ease scheduling demands. (Total = \$22,550)

D. TRAVEL - \$3,000 in Year 05 is requested for travel to two professional conferences (e.g., IEEE Conference on Decision and Control in Houston, TX, Society of Research Administrators in San Francisco, CA) to present findings associated with the investigation. Typical breakdown for one trip would be: airfare = \$400; conference fee = \$500; lodging \$150/day x 3 days = \$350; per diem = \$50/day x 3 days; ground transportation = \$100.

E. PARTICIPANT /TRAINEE SUPPORT COSTS

None

F. OTHER DIRECT COSTS

Budget Justification continues