College Planning Committee Report

Appendices

March 31, 2010

College of Agricultural and Environmental Sciences

University of California, Davis

Appendices (221 pages)

revised, 11/02/09: replaced Jay Rosenheim w/Neal Williams
revised, 11/20/09: replaced Ed Caswell-Chen w/Howard Ferris
revised, 1/01010: replaced Howard Ferris w/Ed Lewis

UC DAVIS: COLLEGE OF AGRICULTURAL AND ENVIRONMENTAL SCIENCES
DIVISION OF AGRICULTURE AND NATURAL RESOURCES
AGRICULTURAL EXPERIMENT STATION
COOPERATIVE EXTENSION
OFFICE OF THE DEAN

Appendix A

October 22, 2009

LINDA BISSON, Viticulture & Enology
RICK BOSTOCK, Plant Pathology
STEVE BOUCHER, Agricultural & Resource Economics
KENT BRADFORD, Plant Sciences
MARY DELANY, Dean's Office
CARL KEEN, Nutrition
ED LEWIS, Nematology
JOY MENCH, Animal Science
LISA MILLER, Human & Community Development
TOBY O'GEEN, Land, Air & Water Resources
RAUL PIEDRAHITA, Center for Aquatic Biology
GANG SUN, Textiles & Clothing
NEAL WILLIAMS, Entomology
GLENN YOUNG, Food Science & Technology

Re: Service on Academic Planning Workgroup

As you know, our college is facing significant budget cuts that will once again dictate a reduction in the number of faculty in our college. Campus planning has not yet advanced to the stage of allocation of college and school targets, but our current estimate is a FTE faculty reduction of between 10 to 20 percent. Because this is the third major downsizing in 20 years, we must align our academic vision to better match our reduced budget. Earlier this year we appointed and charged an Academic Prioritization Committee, and its report was distributed to faculty in early September. In September we held a retreat for chairs and department managers, and subsequently follow-up meetings with chairs and dean's council, including representatives from the college executive committee and Specialist Advisory Committee, to discuss the recommendations of the APC report and next steps. Following these meetings and e-mail input, the decision has been to create a college planning committee that will build upon the recommendations of the APC report, and make recommendations for how our college should be organized to best carry out our academic missions.

The college planning committee will consist of two workgroups that will meet separately and jointly as needed to develop a comprehensive, integrated and contemporary plan for our college. One workgroup will focus on the future opportunities/organization in the areas of "Environment/Natural Resources/Planning/Design," while a second workgroup will focus on future opportunities/organization in the areas of "Agriculture/Food Systems/Health/Communities." I am requesting your service on the Agriculture/Food Systems/Health/Communities workgroup. Programmatic Associate Dean Mary Delany will serve as chair of the workgroup. Please note that these workgroup names are merely working titles for framing the discussions of the workgroup(s), they are not intended to become or signify new divisional names for the college.

The charge to your workgroup will be to:

- Project to the future and envision the cutting-edge and important areas of scholarship that our college needs to be prepared to lead.
- Envision ways to organize the college so that we can meet those challenges and maintain our reputation for world-class scholarship and leadership.
- Consider organizational models that include both stable, enduring departments (existing or new) and interdisciplinary centers that address current issues.
- Recognize and plan for possible re-alignment of faculty and programs, through a process of self-selection, between existing and potential new departments.
- Consider the impacts of reorganization on departmental and interdepartmental undergraduate and graduate degree programs.
- Academic priorities and college organization must address the mission of cooperative extension and align with the ANR strategic vision.
- Existing or new college departments must contain greater than 12 faculty members, even after the smaller FTE targets are set, to ensure stability and preeminence into the future.

I request that the report of the planning committee be delivered to me by February 15. I look forward to your participation in this important planning effort. No response is necessary unless you are unable to serve.

Sincerely

Neal Van Alfen,
Dean

JM/lf

c: Dean's Council
Policy Council

revised, 10/27/09: replaced Chris Benner w/Ryan Galt
revised, 11/16/09: replaced John Eadie w/Dirk Van Vuren

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October 22, 2009

CORT ANASTASIO, Land, Air & Water Resources
MARY CADENASSO, Plant Sciences
MIKE DENISON, Environmental Toxicology
RYAN GALT, Human & Community Development
DOUG LARSON, Agricultural & Resource Economics
SHARON LAWLER, Entomology
FRANK MITLOEHNER, Animal Science
JIM SANCHIRICO, Environmental Science & Policy
MARK SCHWARTZ, John Muir Institute for the Environment (ex officio)
DIRK VAN VUREN, Wildlife, Fish & Conservation Biology
STEPHEN WHEELER, Landscape Architecture

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Neal Van Alfen,
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Appendix B

College Planning Committee (CPC) – Introductory Survey 12-01-09 DUE BY DECEMBER 8

Discussions at both a Nov. 18 retreat and initial working groups (AFSHC and ENRPD, see SmartSite College Planning Committee) meetings focused on defining the CA&ES's vision given the realities of our budgetary stress, the need to adjust, with an objective to maintain excellence and our international reputation. *The premise of considering and affirming our vision at the beginning of the planning process is that any reorganization of academic programs and departments will benefit from a broad-based discussion of our collective College vision, strengths and uniqueness.* In the coming two months, the College Planning Committee (CPC) will use SurveyMonkey to gather information and ideas from all faculty in the College. This first survey includes 5 questions. In addition, we invite you to provide additional thoughts or ideas in the comment section, at the end of the survey.

1. What is your primary academic appointment and level?

Assistant Professor
Associate Professor
Full Professor
Assistant CE
Associate CE
Full CE
Other Academic title (Brenda - can we have a space and they can indicate their title?)_____

2. Career length at UCD

Appointed prior to 1970
1971-1980
1981-1990
1991-2000
2001-2009

Your requested selection of programmatic areas in question 3 should be integrative and broad, and not topical. For example, a possible area could be 'Sustainable Agriculture and Food Systems'. *We emphasize that the selected areas should not to be confused with disciplines, divisions or new department names.* Instead, the final identified programmatic areas should emphasize our College for its uniqueness and strengths: problem-solving focus and multidisciplinary efforts. We ask that you limit your selection of the main programmatic areas of the college to not more than five. When defining these areas, consider that any of those listed should differentiate our College across the other campus academic programs as much as possible. Moreover, we realize that these will all be interdisciplinary, with likely and desirable overlaps. Finally, although we cannot expect to build new programs, some consideration might be given to a vision that is opportunistic. Once defined, the final visionary areas combined should provide for a unique definition of our College, on and off campus, representing our strengths in teaching, research and outreach for decades to come.

3. Keeping in mind the background information provided above (and in the email sent w/this link), we ask that you list up to 5 broad (i.e., not disciplinary) programmatic areas that in combination represent the strength and uniqueness of the CA&ES. An example of a broad area: "agriculture sustainability".

a.
b.
c.
d.
e.

4. Indicate your department (if a joint appointee, indicate your primary department where the larger appointment percentage resides):

Agricultural and Resource Economics
Animal Science
Biological and Agricultural Engineering
Entomology
Environmental Science and Policy
Environmental Toxicology
Food Science and Technology
Human and Community Development
Land, Air and Water Resources
Landscape Architecture
Nematology
Nutrition
Plant Pathology
Plant Sciences
Textiles and Clothing
Viticulture and Enology
Wildlife, Fish and Conservation Biology

When considering your response to question 5, we ask that you think about enabling ideas towards development of synergistic areas that will allow you to make significant contributions (teaching, research, and outreach) in any of your selected programmatic areas. For that purpose, we ask that you select up to four departments that you would likely approach for partnerships of collaboration.

5. In regard to your research, education and outreach activities and interests – please choose up to 4 other departments that are currently or are potentially synergistic for your program:

Agricultural and Resource Economics
Animal Science
Biological and Agricultural Engineering
Entomology
Environmental Science and Policy
Environmental Toxicology
Food Science and Technology
Human and Community Development
Land, Air and Water Resources
Landscape Architecture
Nematology
Nutrition
Plant Pathology
Plant Sciences
Textiles and Clothing
Viticulture and Enology
Wildlife, Fish and Conservation Biology

The College Planning Committee will be running a number of short surveys for faculty to gain feedback on specific topics. The results will be posted on the CPC Smart Site (*let's provide website and a one line explanation of what to look for "name"*). We are interested in your thoughts and ideas, please provide such comments here:

Include other comments here:

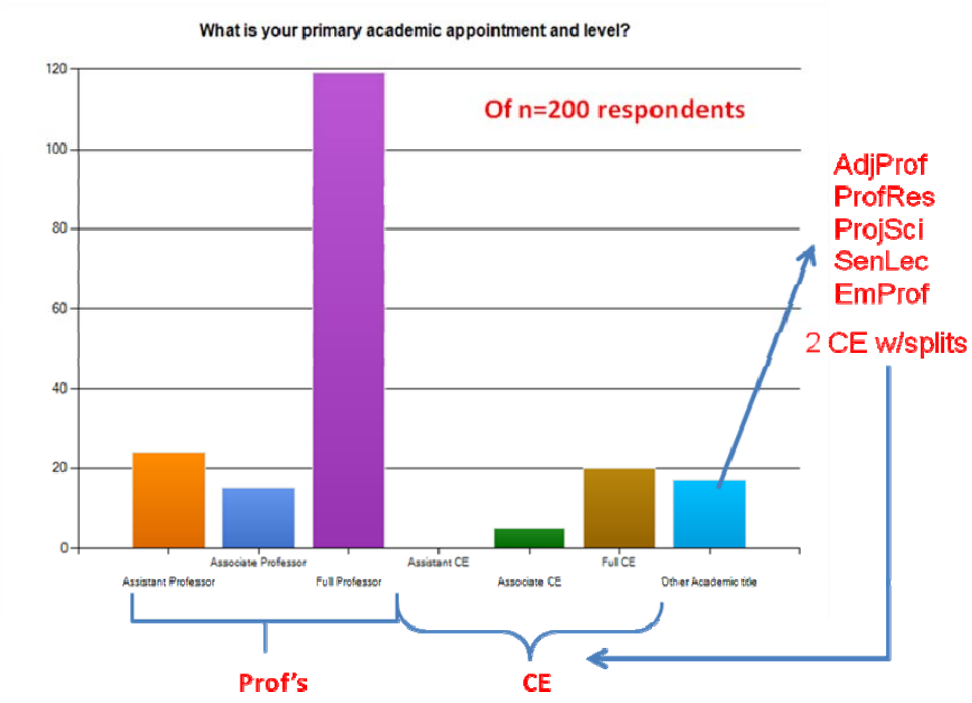
Appendix C

CA&ES CPC Survey #1 Results
12-01-09 to 12-08-09

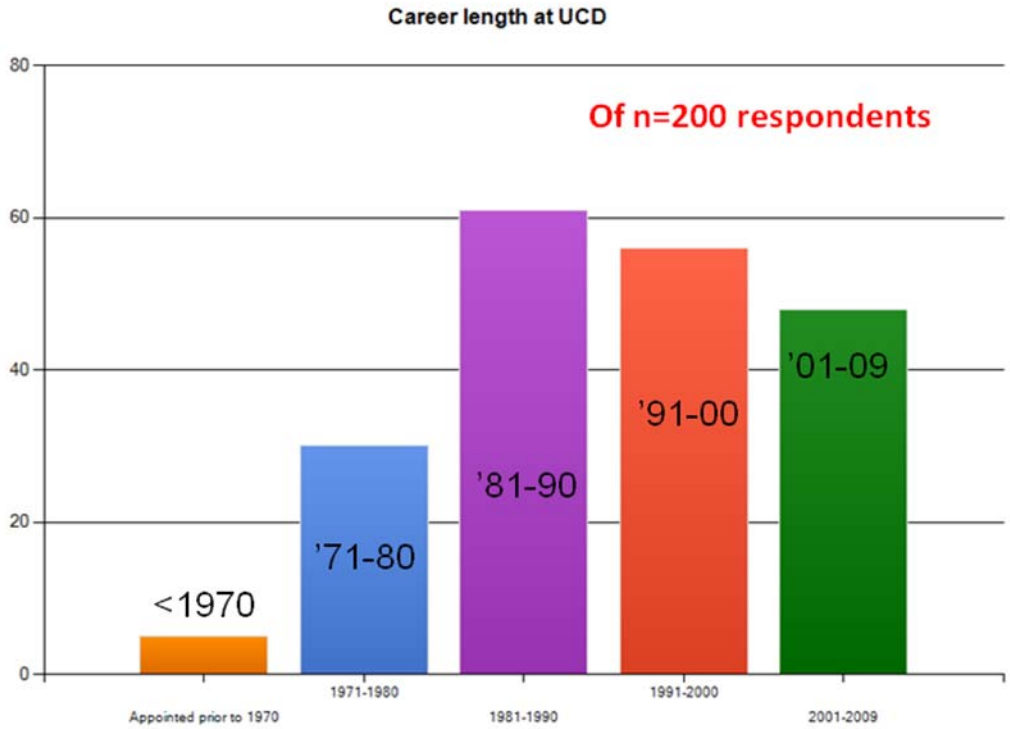
200 responded (514*)	**38.9%**	
158 I-r/AES Professors (314)	50.3%	48.4%
27 Specialists in CE (68)	39.7%	
3 AdjProf (34)	8.8%	8.6%
5 ProfRes (26)	19.2%	
3 ProjSci (72)	4.2%	
3 SenLecturer-SOE (4)	75%	
1 Emeritus Prof (# not determined)	--	

*estimate of the number of individuals invited to take the survey

Academic appointment/level



Appointment date by decade



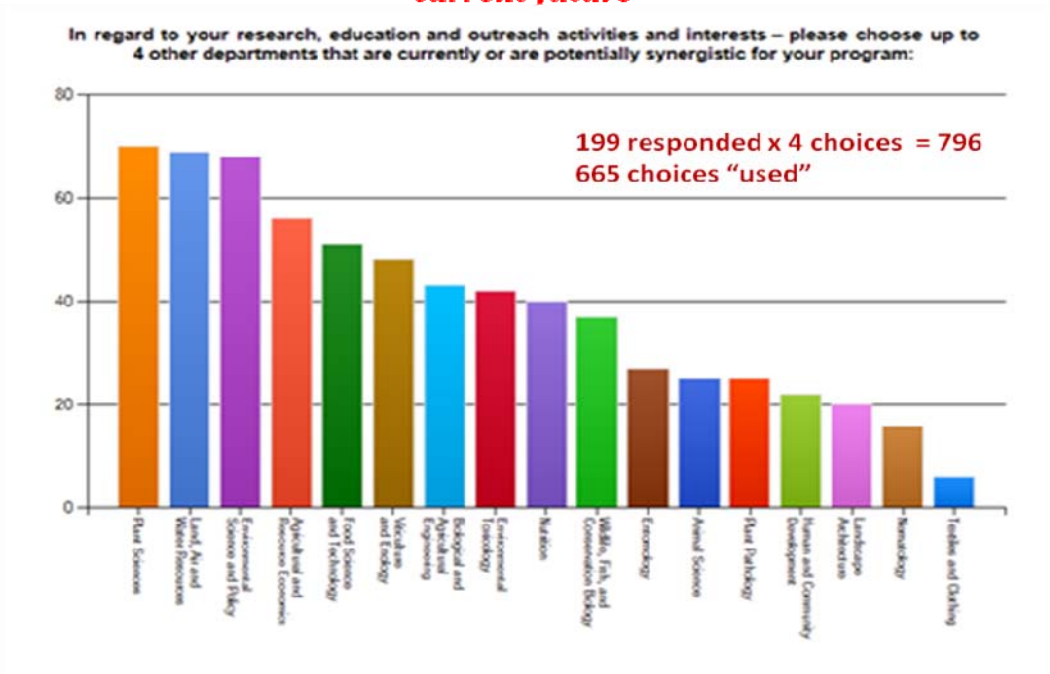
	# Responses	HeadCount^ I&R/AES/CE/L*	CA&ES FTE^ I&R/AES/CE/L*
• Ag & Res Economics	10	30	29
• Animal Science	19	35	35
• Bio & Ag Engin	8	18	12
• Entomology	3	21	21
• Env Science & Policy	16	21	21
• Env Toxicology	4	11	10
• Food Science & Tech	11	20	19
• HumCommunDev	14	21"	22"
• LAWR	25	34	34
• Landscape Arch	8	9"	/"
• Nematology	5	/	7
• Nutrition	15	17"	15"
• Plant Pathology	12	19	18
• Plant Sciences	34	77	75
• Textiles & Clothing	5	5	5
• Viticulture & Enology	4	14	14
• WFCB	7	9"	9"

The CPC recognizes that not all faculty received the call to participate on Dec. 1. Also we were told that some faculty do not necessarily read "group" emails sent from MSO's/Chair's and that others were traveling and could not take the survey. Despite these issues, overall the I-r/AES/CE faculty response rate was 48.4%.

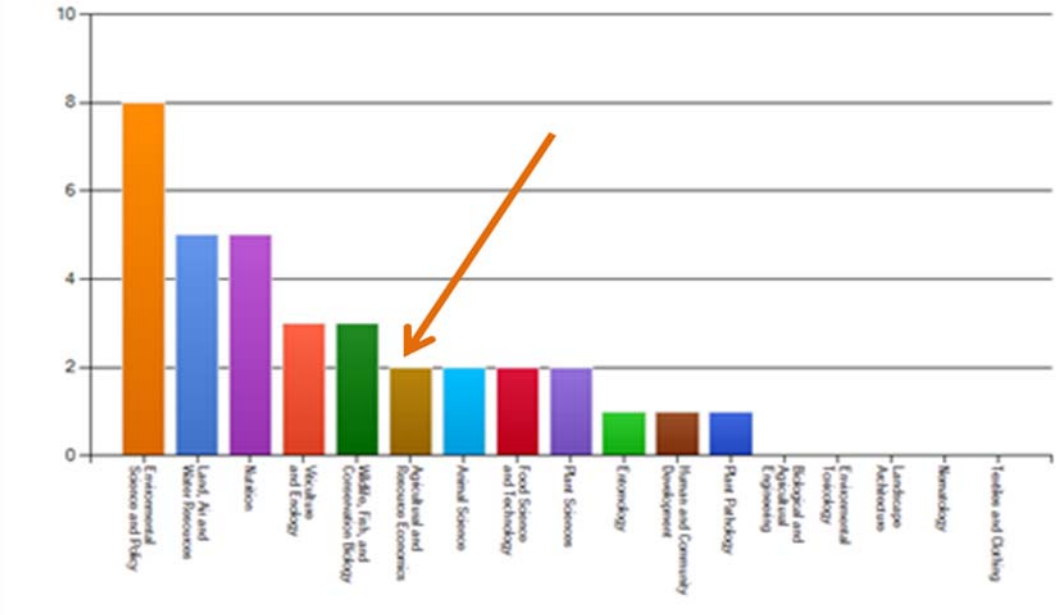
^ The numbers of AdjProf, ProfRes, Proj Scientist or emeritus Profs *were not* included in these head or FTE counts, whereas such respondents are included in the # responses.

Faculty by Dept Synergism

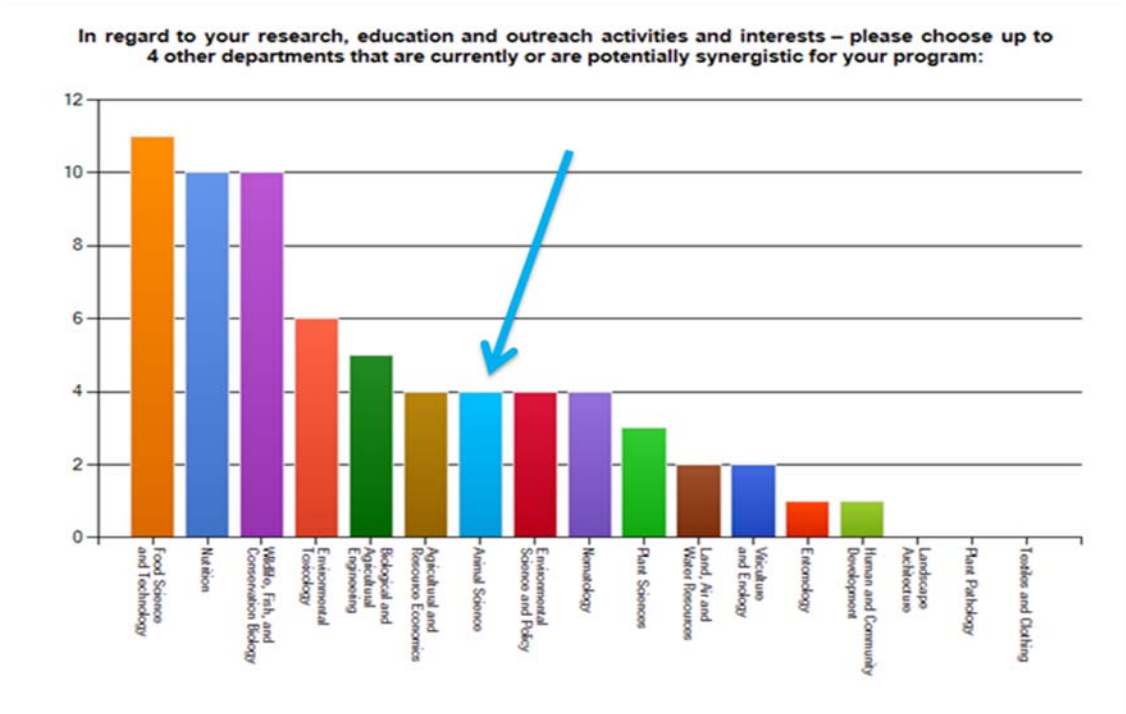
current-future



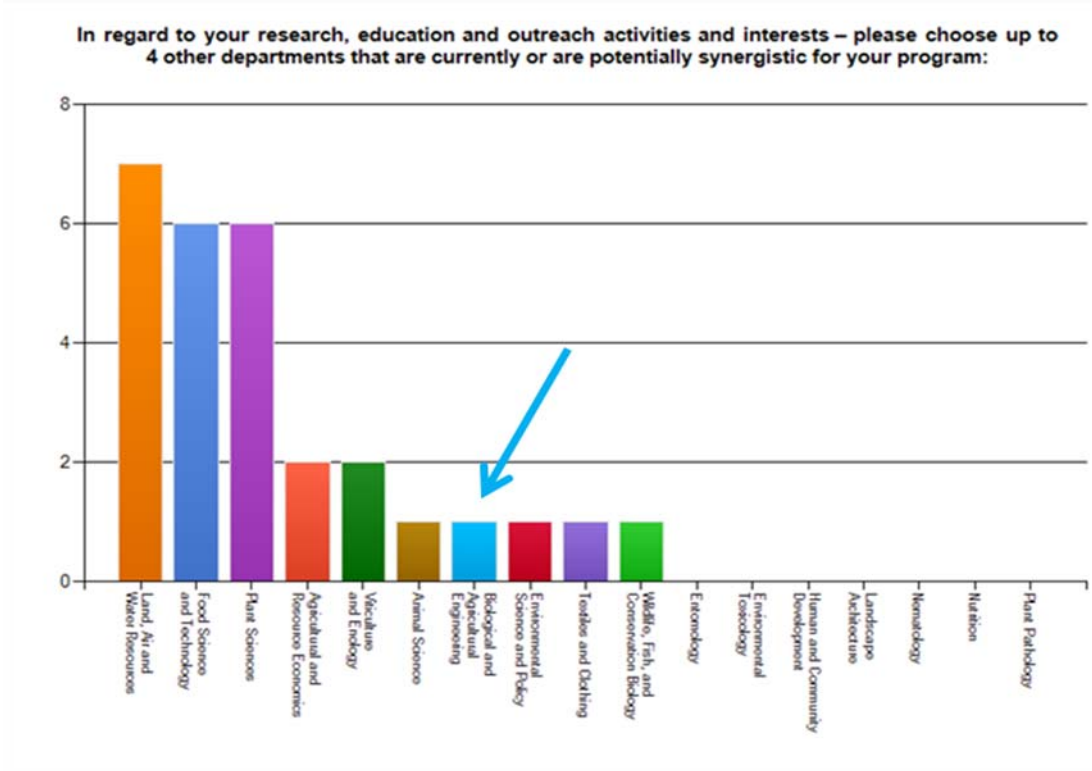
ARE: 10 responded x 4 = 40 choices (only used 35 and 2 of those to ARE)



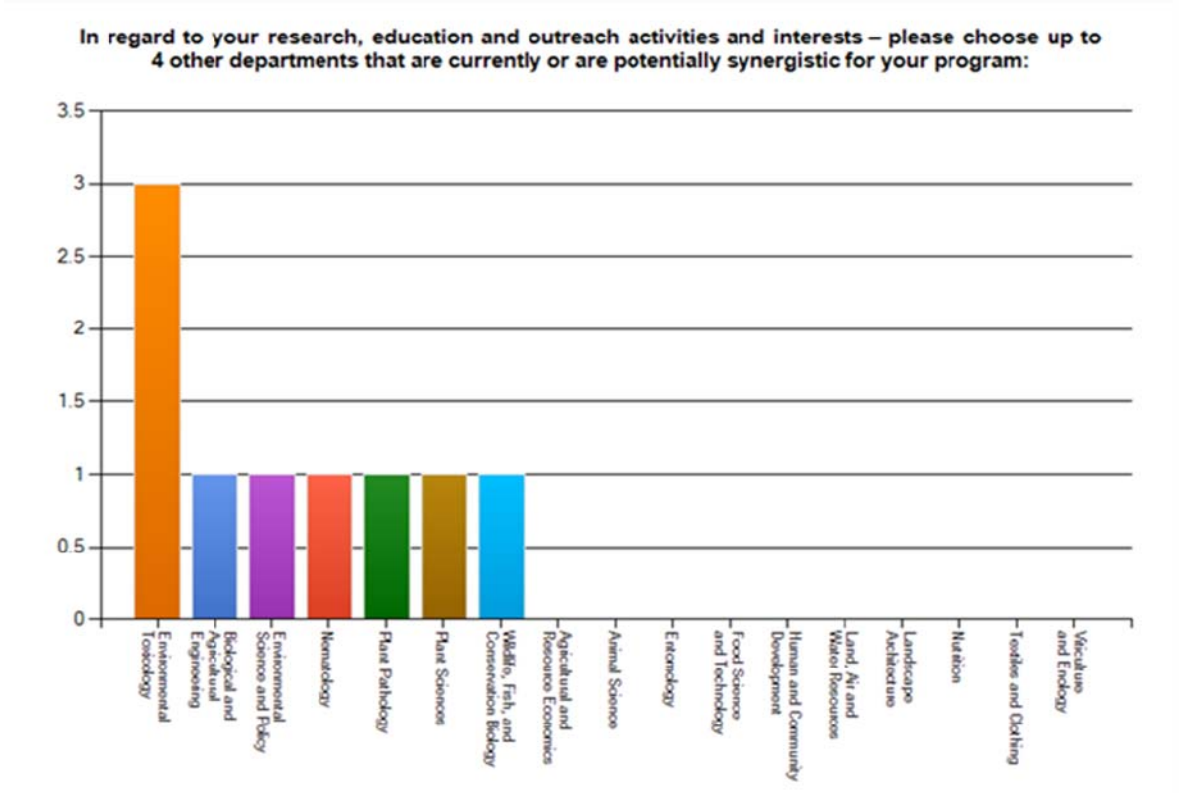
ANS: 19 responded x 4 = 76 choices (only used 67 and 4 of those to ANS)



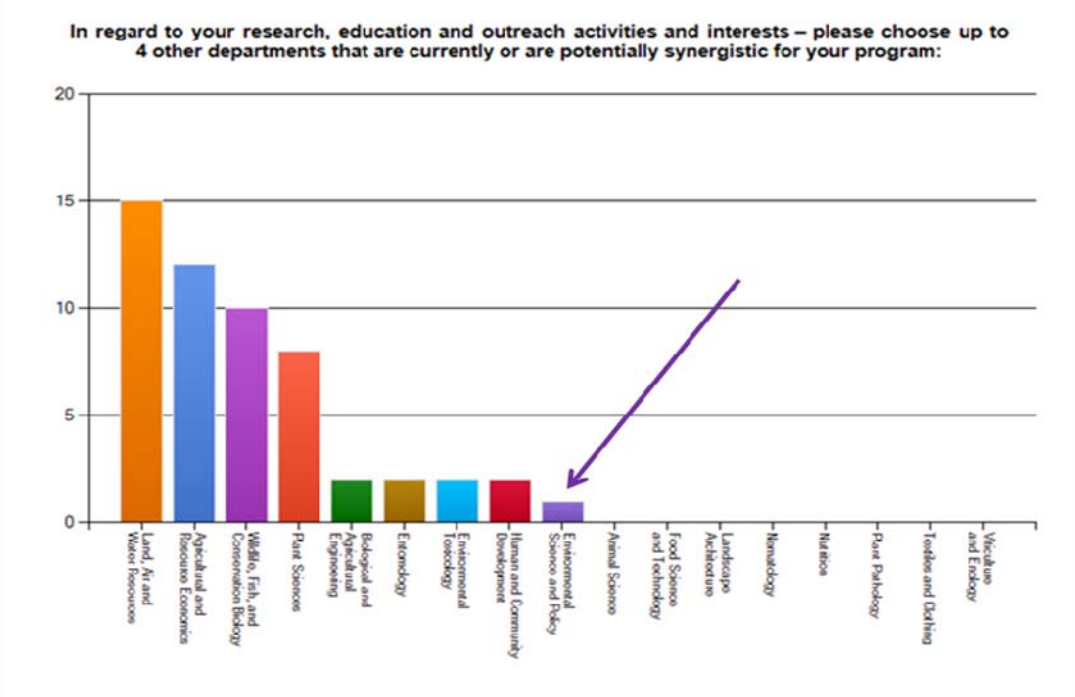
BAE: 8 responded x 4 = 32 choices (only used 28 and of those to 1 BAE)



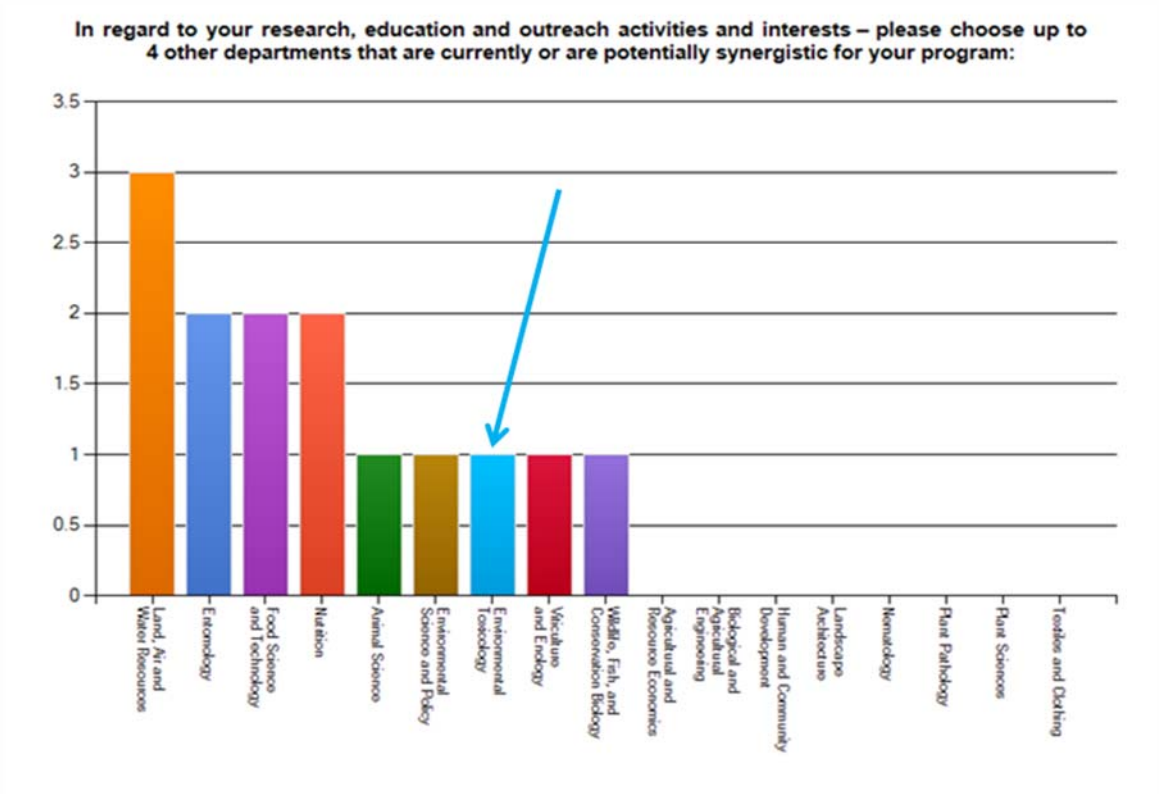
ENT: 3 responded x 4 = 12 choices (only used 9)



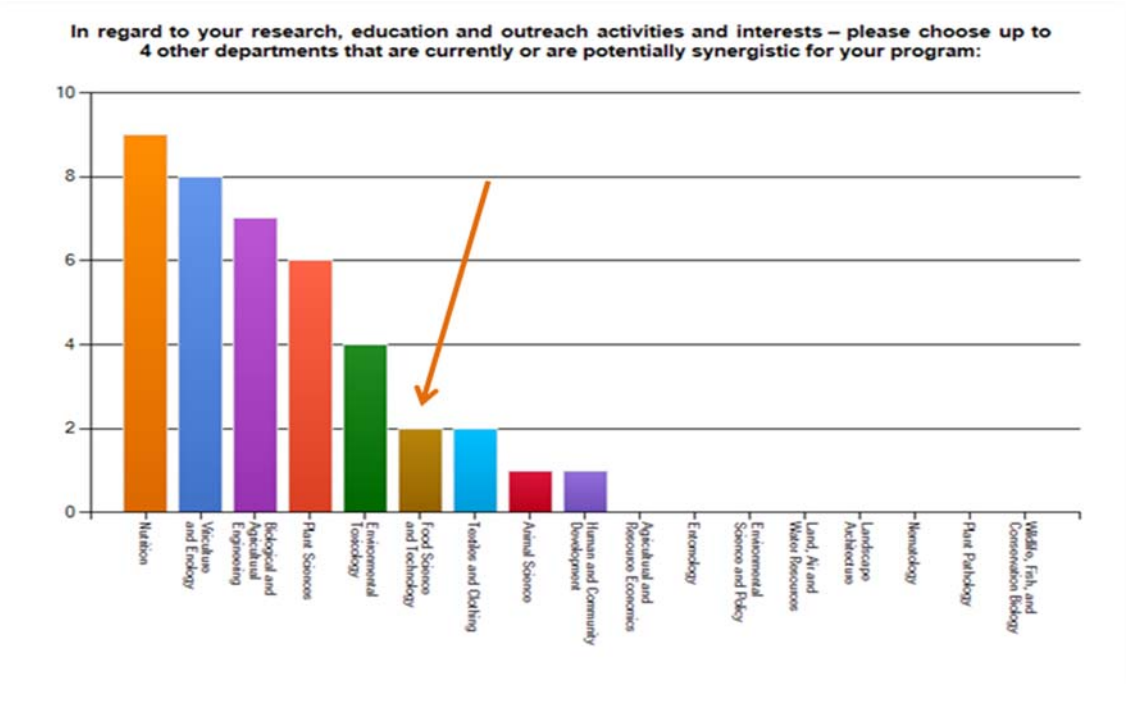
ESP: 16 responded x 4 = 64 choices (only used 54 and 2 of those to ESP)



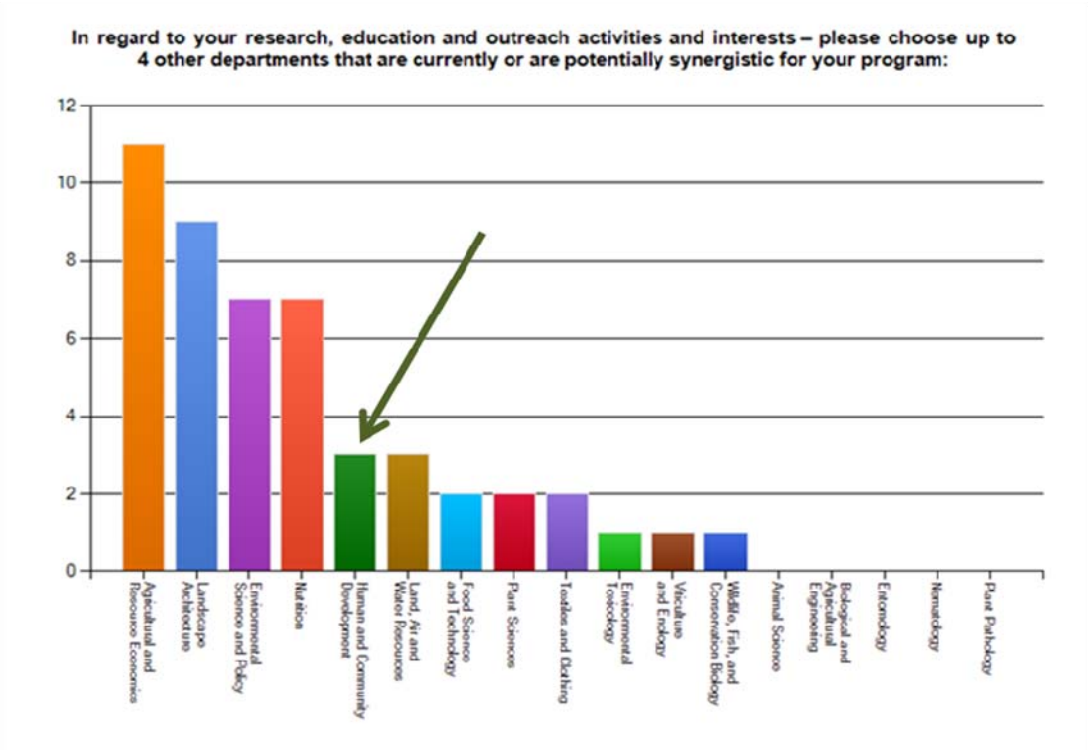
ETOX: 4 responded x 4 = 16 choices (only used 13 and of those 1 to ETOX)



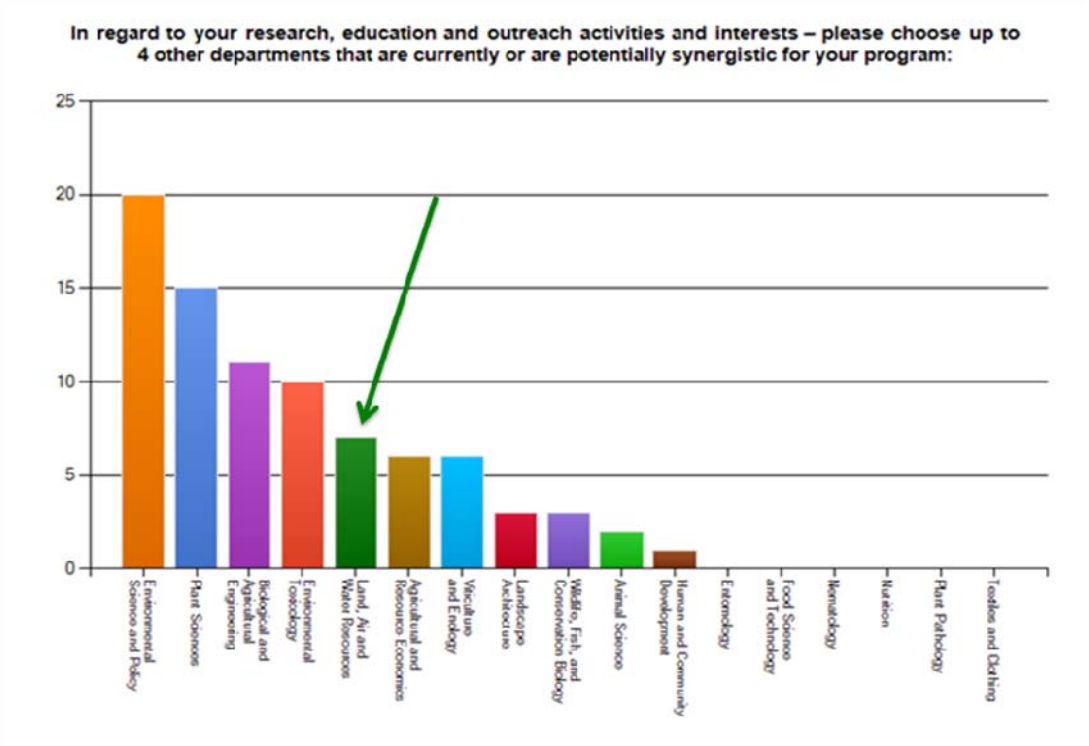
FST: 11 responded x 4 = 44 choices (only used 40 and of those 2 to FST)



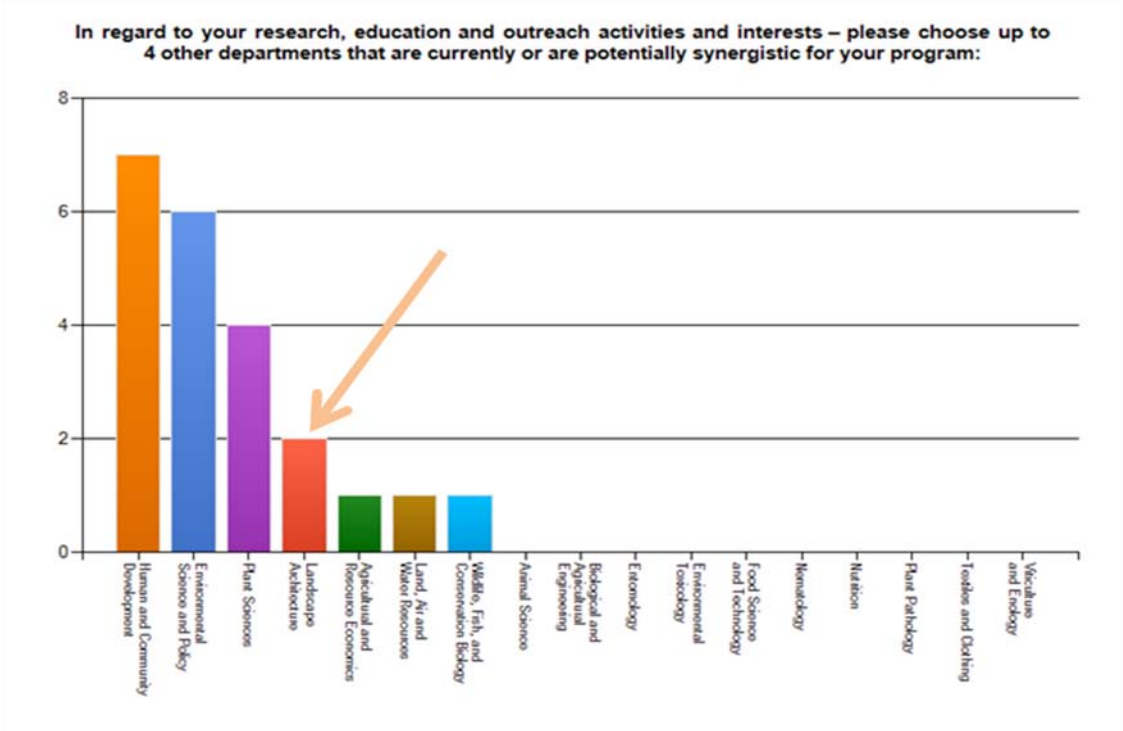
HCD: 14 responded x 4 = 56 choices (only used 50 and of those 3 to HCD)



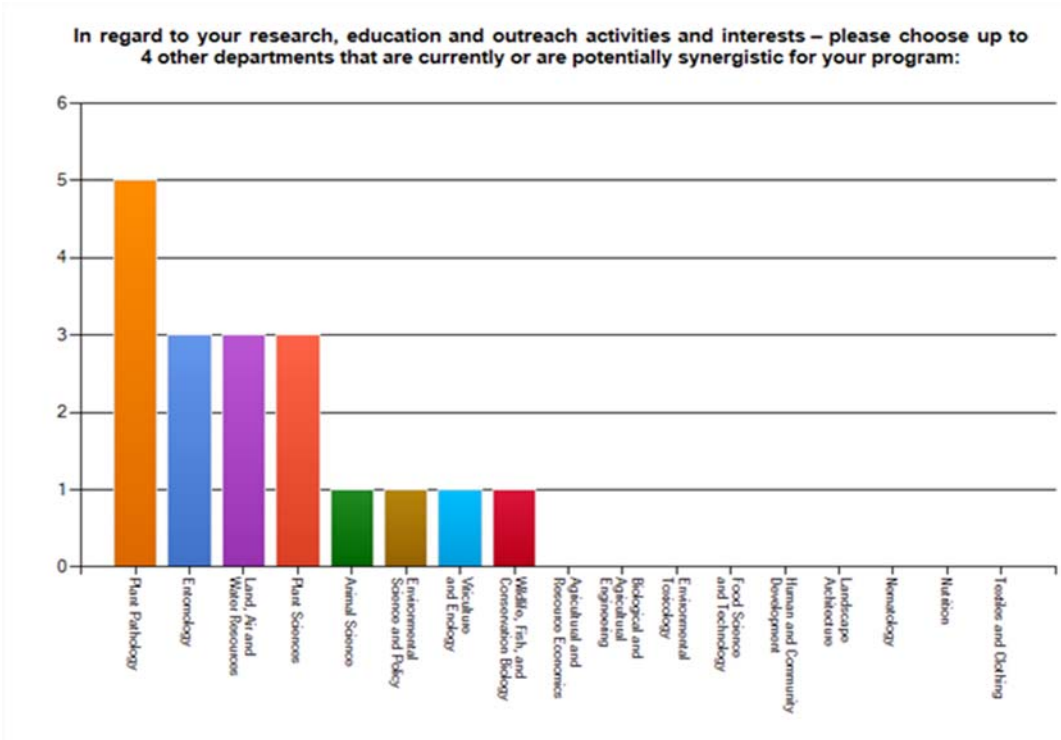
LAWR: 25 responded x 4 = 100 choices (only used 84 and 7 of those to LAWR)



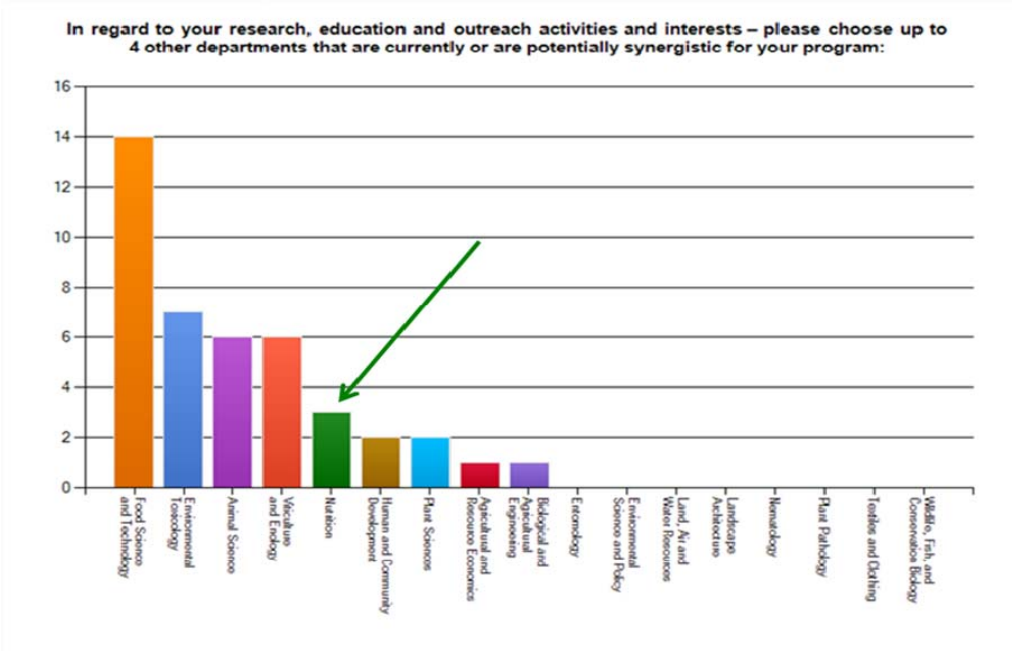
LA: 8 responded x 4 = 32 choices (only used 22 and of those 2 to LA)



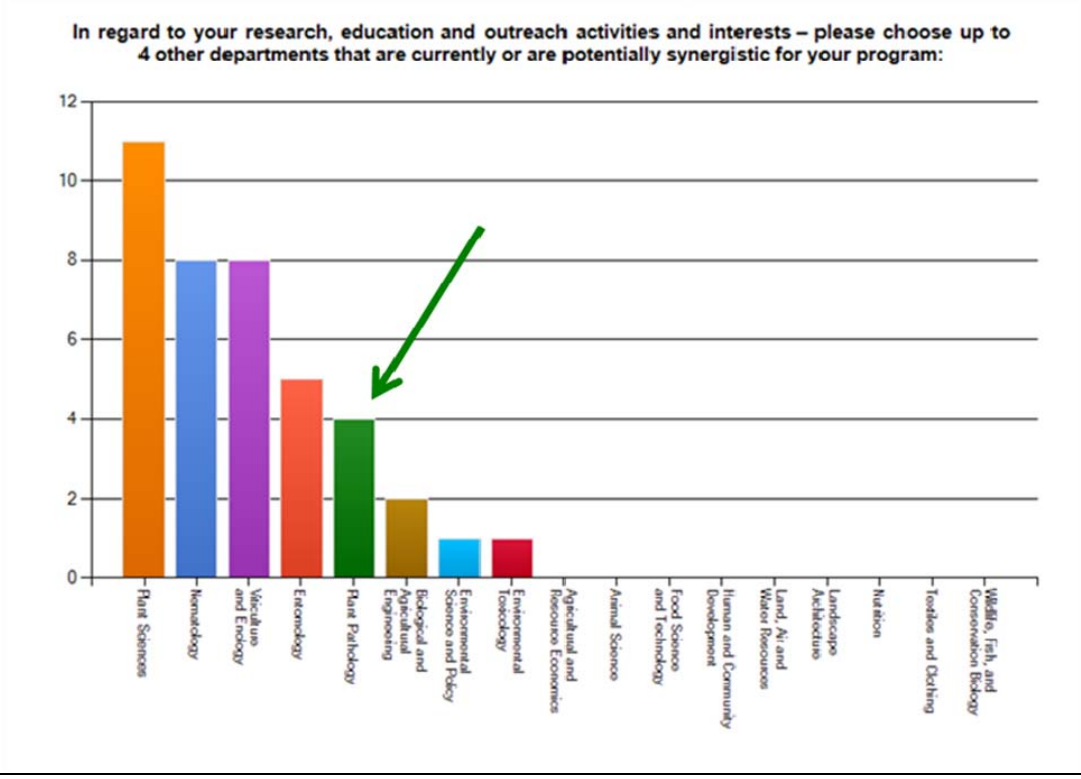
NEM: 5 responded x 4 = 20 choices (only used 18)



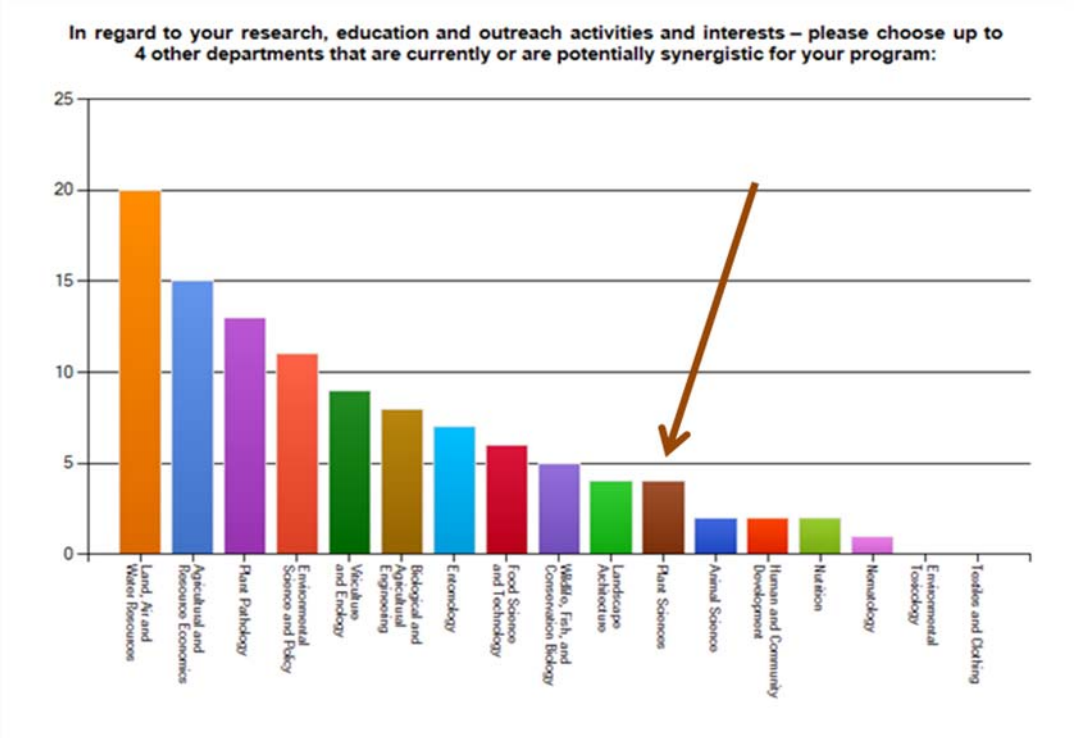
NUT: 15 responded x 4 = 60 choices (only used 42 and of those 3 to NUT)



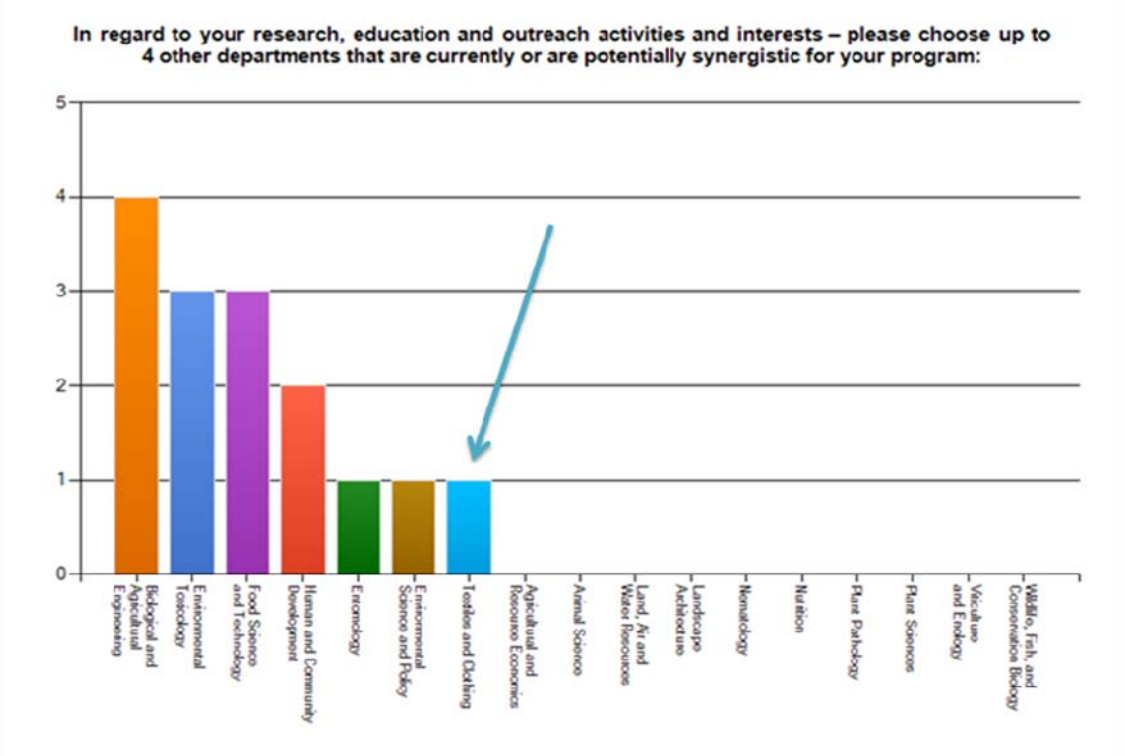
PlantPath: 12 responded x 4 = 48 choices (only used 40 and of those 4 to PP)



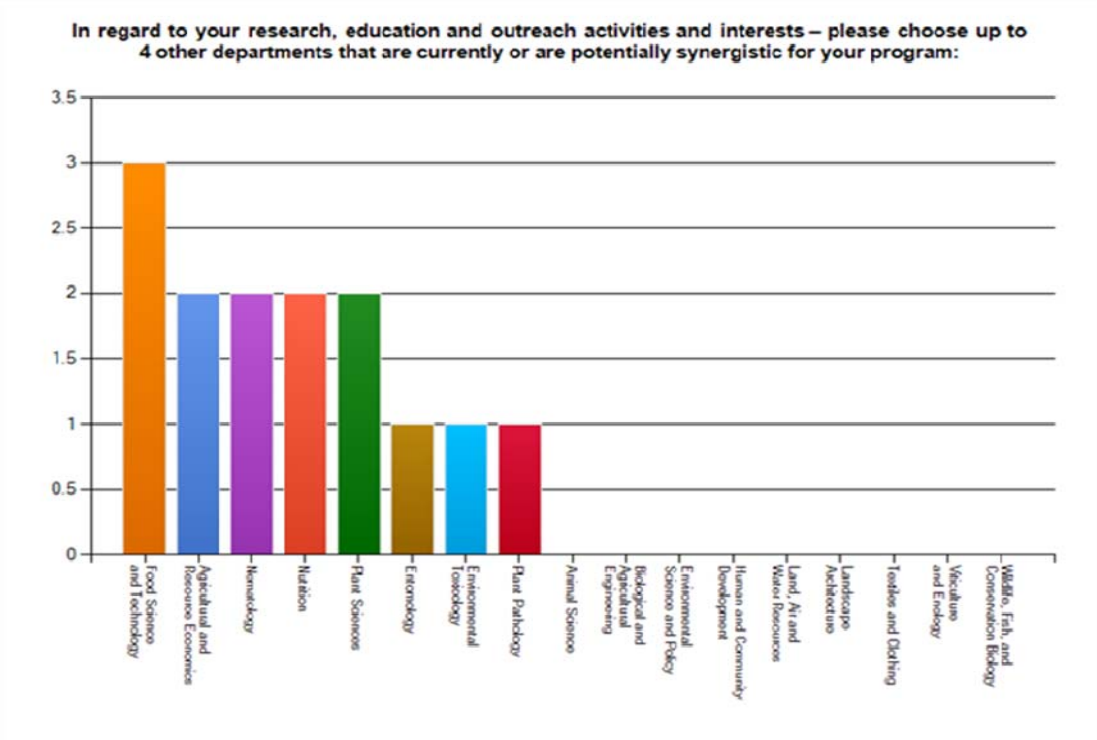
PScl: 33 responded x 4 = 132 choices (only used 109 and of those 4 to PScl)



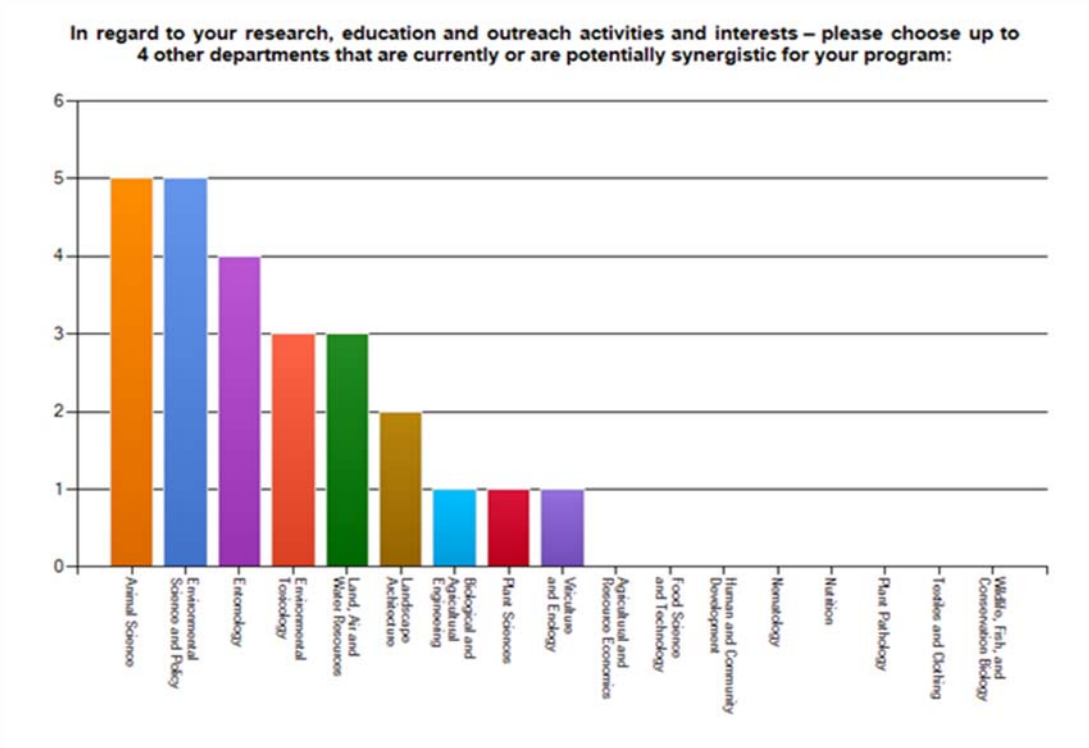
T&C: 5 responded x 4 = 20 choices (only used 15 and 1 of those to T&C)



V&E: 4 responded x 4 = 16 choices (only used 14)



WFCB: 7 responded x 4 = 28 choices (only used 25)



	Programmatic Areas Identified in SurveyMonkey				
1	Env. Sci. (both in ag & non-ag contexts)	Sustainable Ag and Food systems	Water & watersheds		
2	technical expertise in physical sciences (in Ag. College)	agricultural extension	unique undergraduate degrees		
3	Earth Science System	Climate Change and Sustainable Resources	Sustainable Agriculture and Food Systems		
4	Nutrition Education	Sustainable Agriculture	Clinical Studies		
5	Foods For All	Foods, Society and Responsibility			
6	Human Well-being	Renewable Resources (chemicals, materials, fuels & energy)	Sustainable Living and Environment		
7	human health and safety (and not only through food and nutrition)	quality of life	consumer-environmental interface with production	sustainability sciences	science and society
8	Sustainable Agriculture and Food Systems	Natural Resource Use and Conservation			
9	Crop breeding and genomics	Sustainable agriculture	Applied ecology	Invasive species	Pest management
10	Plant-environment interactions	Sustainable management of natural resources	Water management for ecosystem and public health	Nutrient cycling	
11	Sustainable Water for Agriculture and Environment				
12	Food Production Systems and Safety	Environmental Systems Management	Societal Quality of Life	Human Geography	Physical Geography
13	Impact of climatic change on food production	Water supplies current and future	Human ecology in a changing world	Sustainable energy development and Policy	Managemeng of the Sierra Nevada snow pack
14	Sustainable agriculture	Environmental Science and Sustainability	Biodiversity and Ecosystem Studies	Conservation Biology	Disease ecology
15	Land Use, Environmental Change and Geography	Integrated Pest Management	Agricultural Ecosystems and Management	Social-Ecological Systems	Earth Systems Science
16	Watershed sustainability				
17	Physical Science aspects of Environmental Science	Global Change Science	Biological/Ecological aspects of Environmental Science	Agricultural/Sustainable systems	Agricultural/plant science theory
18	Earth's life support systems	Human ecology	Food security and environmental stewardship		
19	plant genetics	biotechnology			
20	Water Resources	Sustainable Living	Ecobiology of Agricultural Production Systems		
21	solving problems at the interface of agriculture and the environment	vertical integration from the organism to the systems scale (e.g. plant to farm, fish to watershed)	delivery of solutions to the public in a manner that they can apply to solve problems	interdisciplinary research, teaching, outreach	all of the above applied in the context of programmatic areas such as: water resources, climate change, alternative energy, sustainable agriculture
22	Sustainable Agriculture and Food Systems	Natural Resources and Health of Environment	Food and Community Health		

23	sustainable food production	sustainable environment	Water and Soil Quality		
24	integrated pest management	production agriculture	applied and agricultural microbiology		
25	wholistic community-based interventions for improved health (int'l and domestic)				
26	healthy families & well being of individuals, families and communities	sustainable communities	sustainable food systems	transnational social and economic transformation	
27	Integrated Pest Management				
28	production efficiency of animal & plant systems	nutritional quality of animal products as human food			
29	the role of science in policy making';policy development and implementation; sustainable ag;environmental problesms of worlewiee scope				
30	Managing Natural Resourses Efficiently	Enabling Nutritious Diets	Increasing Agricultural Production Efficiency		
31	Agricultural science and outreach	Integration of human needs and natural systems	Climate change		
32	Global Change,Water and Watersheds	Biodiversity and Ecosystem Services	Environmental and Human Health	Biobased Materials	Agricultural Sustainability
33	agriculture & biodiversity	global environmental change			
34	Animal Health and Well-Being	Food and Animal Production Systems			
35	sustainable crop plant growth	quality of crop plant products			
36	Sustainable Agriculture and Food Production	Food, Nutrition and Health	Nutrition, Exercise and Obesity		
37	Oceans and Coasts	Global Change	Waters and Watersheds	Biodiversity and Ecosystem Services	Environmental Informatics
38	production ag	environ resources	plant microbe interaction	crop and livestock genomics	human nutrition et al
39	Integrated Pest Management	Plant Health	Sustainable Agriculture and Food Systems		
40	Food and Health	Natural resources and the environment	Agriculture, sustainability and food systems		
41	Human nutrition and Food Science	Nutritional Scince and toxicology	Agricultural toxicology		
42	Food, Nutrition and Health	Integrated farm to food networks	Gut health	Food production and processing for health	
43	plant and animal sciences	food sciences	social sciences	natural resource sciences	ecological sciences
44	bio-based commodities (e.g. biofuels)				
45	natural resource management	Sustainable agriculture			
46	ecosystem sustainability	agricultural production and sustainability	environmentally sustainable business	food systems from production to health	sustainable energy systems

47	agricultural production and marketing	environmental policy	food and nutrition	natural resource management	international relations
48	Environmental & water resources analyses	Animal & plant systems	Human & community development		
49	commercial sustainable agriculture	social effects of water and agriculture	policy and environmental effects of agriculture	integrating agricultural science and policy	planning for a steady stse responsive agricultural industry
50	Agricultural sustainability	Climate change adaptation			
51	Biology of invasive species	Integrated management of plant diseases	Forest ecology	Fungal genetics	Sustainable agriculture
52	Agricultural Production	Environmental issues linked to agriculture	Health and Food	Community and Urban Planning	Natural resource management
53	Agricultural productivity	Environment/Agriculture interactions	Ecology	Food/Nutrition sciences	Pest/Disease management (e.g., IPM)
54	International Agriculture	Molecular Breeding	Crop domestication and evolution	Plant-microbe interactions	Molecular mechanisms of agronomic phenotypes
55	Foods and health	Sustainable agriculture	Water resources		
56	Environment	Agriculture	Human dimensions of Ag and Env		
57	Sustainable Agriculture	Food Safety and Quality	International Agriculture and Rural Development	Ecosystem and Conservation	Economics and Policy
58	Sustainable Energy, Environment and Agriculture	Global Climate Change: Impacts on Environment and Agriculture			
59	Sustainable ag and food systems	Biotechnology in plant and animal production systems	Earth sciences (water, air, soils)		
60	Integrated agricultural production	Food chain development for quality and safety	Increased mechanization of agricultural production		
61	environmental policy	conservation biology	environmental informatics	environment and human health	water and watersheds
62	environmental policy	agricultural systems	ecosystem services	conservation	
63	Agricultural Systems	Natural and Cultural Systems			
64	Food Systems and Health	Sustainable Agriculture and Food Supply			
65	Agricultural (animal and plant) production systems includes policy	Agriculture Environmental Urban Interface includes policy	Sustainable Food Production Systems includes policy		
66	Pest sciences: plant path/weeds/undesirable insects	Environmental sciences	Animal sciences: entomology, WFCB, AnSci		
67	Sustainable Policy, Planning and Design	Agriculture and Food Systems	Environmental Science		
68	Sustainable Policy, Planning, and Design	Agriculture and Food Systems	Environmental Science		
69	ecology	conservation biology	animal biology	organismal biology	water areas
70	Environmental Policy	Water Management	Sustainable Agriculture	Ecosystem Health	Environmental Informactics
71	Environmental Science	Marine, estuarine & atmospheric science			

72	Nutrition, Food and Health				
73	Conservation of natural resources and biodiversity	Water and watersheds	Global change	Regional change	Sustainable agriculture
74	Sustainable Planning, Policy, & Design	Agriculture, Food Systems, & Health	Environmental Sciences		
75	Biodiversity and Ecosystem Services	Science, Policy and Public Perception	Global Change,Water and Watersheds	Regional Change	Environmental Informatics
76	natural resource management	sustainable agriculture	food systems	sustainable/environemntal policy planning, and design	ecology/conservation biology
77	Environmental and Human Health				
78	environmental sustainability	conservation biology	human wealth		
79	Human Ecology	Food, Health, and Community	Environment and Human Health	Agro Ecology and Sustainable Food	
80	Sustainable (Healthy?) Communities: Policy, Planning and Design	Environmental Science and Environmental Resource Management	Sustainable Agriculture and Food Systems		
81	Sustainable Policy, Planning and Design	Sustainable Agriculture and Food Systems	Environmental Science		
82	human health and well-being	Career satisfaction	Human and Animal Development	Individual development	Human ecology
83	agriculture & food systems	policy, planning & design	natural/environmental systems		
84	Foods for Health	Sustainable Agriculture and Environment	Plant Sciences	Food production, quality and safety	Biological Systems
85	Human Ecology (Interaction between people and place, including bio-physical environment, built environment, and social environment)	Sustainable Agriculture and Food Systems	Regional Change	Human and Community Health and Well-Being	
86	Environmental justice	Rural community change	Regional change	Agro-food systems and human health	Transportation, energy and the environment
87	Climate Change Impacts and Response	Food and Fiber Production	Sustainable Practices in Agriculture, Environment and Development	Local, National, and International A&ES Collaboration	
88	Pest management	Agricultural Sustainability	Food Safety and quality		
89	Plant improvement - genetics and production improvements	Environment - urban/rural interface	Nutrition and postharvest handling of crops	Grower/producer outreach	Disease and pest management
90	Agriculture	Environment	Food	Health	
91	Bioenergy	Sustainability	Foods for health		
92	nutrition and food science	foods for health			
93	Food Safety and Human Health	Food Systems and Health	BIOSYTEMS AND ENVIRONMENT	FOOD, FIBER AND FUEL	
94	plant sciences	food, health and nutrition	environment		
95	Domestication	Biodiversity Assessment and Conservation			

96	Applied Plant Sciences	Applied Animal Sciences	Pest and Disease Sciences	Applied Social Sciences	Applied environmental sciences
97	Food production systems	Environment and natural resources	Sustainable agriculture - small to large scale	applied biology of an animal, plant and earth systems	
98	Genome diversity and biodiversity conservation	Plant production for improved human nutrition	Biological and societal adaptation to global change	Developed & developing country exchanges and interactions	Sustainable and low-cost technologies for food production
99	Environmental Resources	Food production	Human health & well-being		
100	Sustainable production, postharvest handling & processing of high value specialty crops	Natural resources and renewable energy	Human health and nutrition		
1	pollution	pest management	ecology	preparation and marketing of food and fiber	farm management
2	Commodity-based agriculture	Natural resource use and evaluation	Technology development and refinement	Dirrect connection to natural resource users (extension)	
3	Agricultural sustainability	Environmental stewardship	Soil and freshwater bilogy/ecology	Pest management	International agriculture
4	human nutrition and disease prevention	agriculture and food safety			
5	Foods For Health	Agricultural Production and Sustainability	Environment and Natural Resources		
6	Agricultural production systems	Natural resource science and management	Biological resource science and management	Food systems, nutrition and health	Agricultural and environmental economics and policy
7	Agriculture	Environment	Human ecology (social science)		
8	PLANT HEALTH/HUMAN HEALTH	SUSTAINABILITY	INTEGRATED PEST MANAGEMENT	CALIFORNIA AG	
9	Spatial context for Environmental studies	Soil and Water Integrative Studies	Biogeochemical cycling studies	Pollution and contaminate amelioration studies	Student preparation for future careers
10	Animal Production and Food Systems	Plant Production and Food Systems	Ecology, Environment and Resource Sciences	Human Health and Welfare	
11	Earth Systems Science and Policy	Sustainable Agriculture and Food Systems	Healthy Communities		
12	agriculture-environment interactions	Policy and economics of natural resource management	food production and health	sustainable agriculture	human and community development
13	Food and Fiber Systems - Preharvest	Food and Fiber Systems - Postharvest	Environmental Sciences	Human Development and Behavior	Modeling and Policy for Food, Fiber qand Environmental Systems
14	Foods for Health	Nutrition and Life Cycle	Environment-Gene Interactions and Health & Metabolism	Foods, Nutrition and Nutraceuticals	
15	Sustainable Agriculture	Invasive species	Plant Protection	Biological Control	
16	Analysis of environmental chemicals	Fate of toxicants in environment	Natural plant components associated with human health	Functional foods	Pesticide regulations
17	Agriculture	Land use management			
18	Environmental biology	Environmental policy	Agricultural systems		
19	Production agriculture	Bioenergy	Foods and Nutrition	Wildlands and wildlife management	Natural resource management

20	agricultural sustainability	sustainable food systems			
21	Human Ecology	Food & Human Health	Sustainable Agriculture		
22	ag and food production, sustainable	ecosystems and environmental health	community development	wine and grapes	textiles
23	food systems	environmental systems	integrated sustainability of ecosystems, human systems, food systems, human health, natural resources (air, water, energy)	research-outreach/extension-capacity building continuum	
24	Environmental change	Land-sea interface	agriculture and environmental health	sustainable agriculture and human health	
25	foods for health	foods, nutrition and chronic disease prevention and promotion			
26	Sustainable Agriculture and Food Systems				
27	Sustainable Agriculture and Food Systems	Environment Sustainablity	Human safty and health		
28	environmental science	plant science	viticulture and enology		
29	Understanding of organism biology (molecules to populations)	Understanding of how human actions can influence organisms or parts of organisms for human benefit	Recognition of how non-human organisms interact with one another and the consequences of this	Understanding of the various impacts of the abiotic environment on how organisms live their lives	Identification of ways (including new ways) that humans can make use of the plants in their environs in a sustainable way
30	Physical resource management (air, water, soil)	Food production	Biological resource management		
31	Earth System Science & Policy	Sustainable agriculture	Sustainable communities		
32	healthy people	human ecology	community development	public policy	
33	Human Ecology	Environmental Sustainability & Policy	Biodiversity and Conservation	Food and Health	
34	human health	environmental processes	applied conservation biology	agricultural production systems	people/environment interactions
35	sustainable food, environment, and consumer systems	integrated food production	environmental and consumer systems	healthy consumers and communities	
36	Sustainable agriculture	environmental quality	climate change	natural resource management	food and health
37	Water quality	Crop production	Agricultural - Environmental interactions	Animal production	Agricultural economics and environmental policy
38	Sustainable Agriculture	Food and Food Systems Management	Natural Resources		
39	Ecosystem based management	Management response to environmental change			
40	Genetics and Breeding	Crop production	sustainable ag	post harvesting	viticulture and enology
41	Earth system science	Carbon cycling	Aqueous biogeochemistry		
42	Food nutrition, safety and health	Food sustainability and security	Global Agriculture and worldwide food systems	Natural Resources and the Environment	
43	Ecology & Conservation Biology	Agricultural Sciences (Sustainable Ag)	Natural Resource Management	Environmental Systems, Science and Policy	Plant & Animal Biology & Management

44	Sustainable Agriculture and Food Systems	Agroecology	Interface between urban and agricultural communities		
45	basic biology and biotic interactions	environmental science	human health and wellbeing	agricultural practices	resource management and economics
46	ecologically sustainable and profitable farming systems	detection and managementment of exotic pests and diseases	rationale management of california's water resources	food safety	
47	Food Systems and Health	Plant Ecology	Mechanization of Agricultural Production and Processing	Postharvest Technology	
48	Agricultural sustainability	Animal, plant and food health and safety	Community and resource management		
49	Production Ag	Whole animal biology	Food Safety	Product development	
50	Climate change mitigation and adaptation	Agricultural productivity and sustainability -- CA and global	Origins and future of CA biodiversity	Integration of science and economics to improve natural resource management	Wildfire science and management
51	Environment	Agriculture	Society		
52	Sustainable agriculture and food systems	Community planning and vitality	Youth, Families, and Society		
53	plant sciences	animal sciences	fermentation	environment and community	economics
54	Sustainable Agriculture and Food Systems	Conservation and restoration of California's natural resources			
55	food and society	food and health	field to fork		
56	plant health				
57	International Agriculture and Development	Sustainable Agriculture and Environment	High Value, High Technology Agriculture		
58	Increasing worker and consumer safety in agriculture	Crop production minimizing chemical inputs	Soil and water sustainability		
59	Protection and Enhancement of California's Environmental Quality	Measurement and Use of Ecosystem Services Values in Land Use Decisions	Agricultural and Environmental Policy Analysis	Water Allocation, Use, and Policy	Improvement of Food Quality and Human Health
60	sustainable ag	breeding and genetic improvement			
61	Sustainable agricultural management	Agricultural products for human living (post-harvest, foods, clothing, etc.)	Environmental and natural resource management (includes emphasis on human-modified landscapes that could help distinguish us from UC Berkeley mission; and would intersect to some extent w/ sustainable ag mgmt but include other arenas; I have more extensive thoughts on this)	Integrative; or Resource policy and economics - cross-cutting	
62	environmental/natural resource policy analysis	ecosystem services	integrated human/ecosystem modeling	behavioral bases for environmental degradation	land use and land use policy
63	Food production	Origins of agriculture	Crop evolution		
64	applied research	basic research	outreach		

65	pests and diseases, biology and control	sustainable agricultural production	food quality and preservation	plant genetics	international expertise
66	Sensory science methodology	Consumer testing methodology	Psychophysics	Experimental psychology	Cross-cultural studies
67	competitiveness of california agriculture	food trade and global food security policy	tradeoffs between environmental interests and agricultural production	impacts of government policies for agriculture and the environment	
68	foods for health	improving human and community resources in rural areas	management of agricultural and environmental/natural resource systems in face of climate change	sustainable agriculture and food systems	
69	Agricultural Genomics	Efficiency and Sustainability in Agriculture	Environmental and Economic Sustainability in Ag		
70	animals, food and nutrition	plants and soil	environment		
71	human health and well being	land and water conservation	animal health	plant utilization and conservation	
72	Foods and Health Outcomes				
73	Pest management	Environmental resources	Integrative biology		
74	Animal Biology and Conservation	Plant Sciences and Conservation	Sustainable Natural Systems	Sustainable Communities	Sustainable Agriculture and Food Systems
75	Agricultural Production	Food and Nutrition	Environmental Planning and Policy	Biotechnology and Applied Bioscience	
76	Teaching	Food Quality	Foods for Health		
77	Agricultural Sciences	Environmental Sciences			
78	Sustainable agriculture	food systems	climate change	international agriculture	
79	Climate change	Conservation of biodiversity	Restoration ecology		
80	Agriculture				
81	environmental management	restoration and conservation in working landscapes			
82	Sustainable Food Systems	International Agricultural Projection/Relevance	World-Class AES/Extension System	Integrated Genetic Pest Management	State of the Art Organic Ag R&D
83	Natural Resources Management	Sustainable Agriculture and Food Systems	Water Quantity and Quality	Rural Communities and Economics	
84	Using agriculture to improve dietary quality	Foods For Health	Linking Science with Extension		
85	Production of food and fiber without harming the land	Providing for the health and safety of those that grow our crops	Understanding the structure and functions of agroecosystems		
86	Vertebrate animals and their environments	Envrionmental restoration and preservation			
87	Food and fiber production	Food Safety (broad definition)	Environment and Agriculture (including but not limited-Sustainable)	Natural resource biology and management	
88	Biological Bases for environmentally sound food production	"Chemical Bases for environmentally sound food production	Mathematical models of Agriculturally and envirnomentally relevant processes	Economic analysis of ag production	Environmental analysis

89	agricultural sciences	human health and enjoyment	natural resources		
90	Human and environmental health and toxicology	Sustainable materials from natural resources			
91	Environmental and natural resource policy	Conservation of natural resources	Ocean and fisheries management	Sustainable provision of ecosystem services	Ecosystem based management
92	Sustainable Development	Environment and Energy	Environment and Development	Environment and Health	Regulation, Agriculture and Environment
93	sustainable agriculture	Food Systems, Nutrition and Health	Regional and Global Systems	Ecology and Conservation Biology	Natural Resource Science and Management
94	Food and fiber production	Food Safety (broad definition)	Environment and Agriculture (including but not limited-Sustainable)	Natural resource biology and management	
95	Biological Bases for environmentally sound food production	"Chemical Bases for environmentally sound food production	Mathematical models of Agriculturally and envirnomentally relevant processes	Economic analysis of ag production	Environmental analysis
96	agricultural sciences	human health and enjoyment	natural resources		
97	Human and environmental health and toxicology	Sustainable materials from natural resources			
98	Protection and Enhancement of California's Environmental Quality	Measurement and Use of Ecosystem Services Values in Land Use Decisions	Agricultural and Environmental Policy Analysis	Water Allocation, Use, and Policy	Improvement of Food Quality and Human Health
99	Sustainable Development	Environment and Energy	Environment and Development	Environment and Health	Regulation, Agriculture and Environment
100	Environmental and natural resource policy	Conservation of natural resources	Ocean and fisheries management	Sustainable provision of ecosystem services	Ecosystem based management
	sustainable agriculture	Food Systems, Nutrition and Health	Regional and Global Systems	Ecology and Conservation Biology	Natural Resource Science and Management

CPC Survey #1 (12-01-09 to 12-08-09)

200 Respondents, with comments by 58
Responders: I/r–AES-CE faculty (185), Adj Prof (3) , Lecturers-SOE (3), Prof Res (5), Emeritus Prof(1), ProjSci (3)

#6. The College Planning Committee will be running a number of short surveys for faculty to gain feedback on specific topics. The results will be posted on the College Planning Committee project site on SmartSite; see Surveys folder under Resources. We are interested in your thoughts and ideas, please provide such comments here:

1. Most answers to Question 3 are likely to be vacuous. What are 'Sustainable Agriculture and Food Systems'? That phrase could be used to describe almost everything we currently do in CAES. In sustainable systems, firms make enough profits, consumers get enough good food, and our physical environment is pleasant. Why do we need new labels to describe what we already do? If the idea is to do something different, then we need to be specific about the topics and disciplines that we wish to emphasize.
2. good use of the internet tool
3. Think broadly and about the current and the future, not about the past - our role as faculty members is to be scholars and educators and serve the state/publics - not just "stay the same" because it is easy and what we are used to or be be afraid of change.
4. Read the recent (Nov 2009) NRC report titled "New Biology". Make sure that our college fits in because it will drive ag science this next decades.
5. I believe that one of the ongoning and future strengths of the COllege must be in sustainability, which I broadly define as including sustainability of production, environemental health, and economic health of the agriculture enterprise. To that end I think the College would be best served by have policy personnel in all Departments rather than in a separarte department and thus somewhat divorced from one or more areas.
6. In the end someone is going to have to make a decision of what to merge and cut. You already have a lot of the information to make an intelligent decision. I suggest you just move on now on what needs to be done and use all the brain power and meetings in making the decision succeed. Do you really need more surveys and planing committee meetings?
7. The college needs a conservation geneticist.
8. Please try to avoid merger mania. Small interacting groups ought to be the most effective.
   I think we have to keep sustainable ag production as a central part of our vision--we can broaden but I don't think we can make it or have it appear to become a subsidiary part of our vision
9. Some disciplines fit neatly under a single programmatic area, while other disciplines spread to all of them. We need a model to accomodate both.
10. Water is the oil that powers California Agriculture and Urban development. Neglecting the further developement of this area of research and teaching would be a serious mistake for the College
11. Merging ESP with WFCB might bring discomfort and disruption in the short term, but in the longer term it is hard to think of a good programmatic reason to keep the two depts separate. They would make an excellent Dept of Conservation Science and Policy (or something like that).
12. Pay attention to the College Strategic Plan -- it is a well-though-out and vetted strategy, and should provide the basis for change.

13. The university already has a mechanism that develops programatic strengths. Graduate groups serve to bring together like faculty and recruit and train graduate students for research in areas that are broader in scope than any one department. Additionally, these programs serve as the incubator for program grants and research centers. The agricultural and environmental chemistry GG and pharmacology and toxicology GG bring together professors and researchers from across the university and college for training the next generation of researchers and conduct research projects generally in the areas of environmental health, chemistry, biology and toxicology. I understand the need to identify common programatic areas of strength within the college in order allocate FTEs for future hires in anticipation of the shrinkage and consolidation of our college. I would look at our very active graduate programs for programatic areas and themes because these programs reflect active areas of research and discovery and could be attractive areas for undergraduate education.
14. The specialized areas of faculty is more important than just the number of faculty to combine the current departments.
15. A criterion for a successful cluster should be the ability of the faculty in that cluster to outline an initiative that is potentially fundable by a major agency (NIH, NSF, DOE, USDA) or Foundation or industry consortium, to which all in the cluster could contribute. A successful cluster should be programmatically driven, but also incorporate the administrative clustering concept which is presently being planned on a separate trackin the College. IE, programmatic and administrative clustering should be brought together.
16. It is not clear how the proposed reorganization can promote something different than the current plethora of centers and institutes. Faculty are resourceful in collaborating for research and outreach. However, teaching is an assigned work element with a workload that is destined to increase if not proactively considered. I suggest investigating ways to consolidate/streamline the college curriculum portfolio to serve multiple degrees currently offered in slightly different ways across departments.
17. As the number of AES and CE FTE continue to decease, the college should "begin" to shape its future as an I&R college.
18. Thanks
19. -What are the most important and promising emerging research topics in your field. -What research topic/s would you like to undertake next?
20. We should be wary of reducing our scope of excellence and should plan for (re)expansion in the future.
21. A major stated priority for the college is addressing climate change, yet the campus lacks a small number of FTE (~2-3) in water and atm. sci. (climate modeling) that would hugely boost our ability to carry on the necessary research and teaching and to capitalize on major funding opportunities that are happening now and in the future. Consistent with the APC report, I hope that such mission-based priorities are given due consideration.
22. LAWR seems to me to be optimum in size for efficiency, cost-effectiveness, and colleagiality. We have a multi-disciplinary program with common interests in environmental science and management and disciplinary interest in transport processes and natural cycles.
23. I think limiting the number of programmatic areas to 3 is a mistake if you want to change the concepts to revolve around major problems to address rather than disciplinary structures. Three is not a magic number and it poorly captures the range and depth of broad problems our civilization faces. I also think that problems change through time, but the disciplines needed to

address them are relatively stable by comparison. I do a lot of interdisciplinary work, but this fad of abandoning them outright is out of control. Be careful and look to the future, not the past.

24. This is an easy and hopefully effective method for polling the faculty.
25. This process is supposed to be about maintaining excellence in the College programs in the face of reduced faculty numbers--the problem is that it appears there is great pressure to interpret this as maintaining or increasing student numbers and creating large majors and super departments, while largely ignoring research needs of the state, country and world, and ignoring smaller majors which may be more critical to the well being of the state, country and world than some of the larger ones.
26. Maybe there should have been an 'other' option for those, like myself who collaborate with departments outside the College (similar to how graduate groups span departments). While the scope of the survey is limited to the College, the question is broader and perhaps cross-college program splits are worth identifying (whether supportable or not).
27. This is a scary process for some because it presents itself as the begining of the end for some disciplines. In this planning process it will be important to demonstrate specifics on how core disciplines will remain intact. In turn it should be clearly spelled out which will fade away.
28. Themes are not a good way to organize this discussion or the college.
29. Keep it transparent and up to date. Make it comprehensive.
30. Excellent Idea
31. Our efforts at designating some broad and integrative programmatic areas should do just that--and avoid too many areas. The temptation to create more than two or three programmatic areas runs the risk of becoming confusing to differentiate among them. In my view simpler is better. Overspecialization has led to fragmented problem solving rather than interdisciplinary creativity which we seek for holistic problem solving. The term “systems” is inherently integrative and reflects the idea of creating connections between the parts. The spirit and mission of the CAES should fundamentally be to embody the sustainable integration of culture and nature.
32. I'm interested to see the results. This is an easy and hopefully effective method for polling the faculty
33. It feels important to recognize that in reorganizing major themes within the College, majors should be the focus 'unit' for re-distribution, and not entire prorgams. It also feels critical for the restructure of funding and allocations processes be considered, as it directly impacts the decision-making process within this restructuring.
34. Landscape Architecture is the only professional degree in the college (in fact, across campus) and is tough to categorize because it crosses natural science, social science and applied disciplines (like planing, architecture and design). It is the field's synthesis and integrative nature that gives it value.
35. I believe that one way or another CA&ES should play a more direct role in addressing the challenges of the twenty-first century. Those challenges include climate change, sustainable development, and a sustainable agriculture that is not dependent on fossil fuels. The Agricultural Sustainability Institute is a start toward addressing such needs, but a relatively small start. Whether it's through departments, centers, themes, clusters, or institutes, we need a stronger and more visible commitment to these issues, one that presents the college as a unified institution addressing a variety of timely topics, a prime source of information, research, and learning for the public to turn to.
36. (a) It might be helpful to solicit (by survey) some examples of current collaborative, interdisciplinary, issue-focused research/outreach projects that might serve as inspirational

models as we embark on this "envisioning" exercise. (b) Ask the faculty to "design" interdisciplinary workgroups, drawing on current strengths in the college, to bring a creative, problem-solving approach to issues within each programmatic area.

37. Faculty affiliation or affinity with thematic areas will allow holistic re-evaluation of college structure.
38. important to encourage collaborations like foods for health
39. Don't mess up well-functioning existing departments by merging them with weaker ones that do not function well or generate comparable extramural grant funding.
40. I appreciate the attempt to make this process as participatory and transparent as possible. I also hope that we will keep in mind the interests of our stakeholders, many of which are involved in agricultural production. I also hope that there will be a careful look for areas of redundancy with other colleges or at the university level; these could be areas that could be adjusted with less impact.
41. In the present situation, we have examples of small to medium-sized departments that are highly efficient from an administrative perspective and highly productive from an academic perspective. It follows that larger is not necessarily better. I would like to encourage the committee to think about how we might maintain the essential aspects of disciplinary integrity, especially those disciplines that the committee believes will serve the College in the medium-term. I would not be surprised if the desirability of disciplinary integrity is not occasionally opposed to the push to consolidate units (including administratively), as well as to the trend to re-define ourselves. What to change and what to protect creates a natural tension, and one that I hope can provide balance to the process of recommending changes to the College.
42. Outreach is increasingly not being suported in departments; this should be addressed.
43. Good idea. Will keep you routinely in touch with the thoughts of the faculty.
44. In my opinion, the richness of the departments listed above is worth retaining. You can eliminate departments easily, but it's hard to restore them, and I believe that the breadth that we offer is worth the modest difficulty of maintaining small departmental units.
45. What distinguishes CAES most from all other academic units in the UC system and makes it unique in teh UC system is its strength in the agricultural sciences.
46. While it is unfortunate that we are facing this financial crisis, the long term areas that the college contributes to will continue to be critical for the future. We should think past the present moment and position the future college in a way that will allow it to continue to be the best of its kind in the world. Change is disruptive but is essential for progress. We should embrace the opportunity rather than dwell on the loss.
47. Don't try to do this electronically. The college needs leaders at this time. To be a leader one needs to cultivate followers. Followers are cultivated by developing relationships and mutual trust. This is done by developing a sense of teamwork. To do this the Dean and members of the Dean's Office must act like members of a team not just sit on high and expect the faculty to mill around until they come up with a solution that satisfies "his majesty" the Dean.
48. The College has already created a large Department consisting of some 80+ faculty members. It has not saved us a penny, created a situation where the student/faculty ratio is so low that it is an easy target for diminishing funding/size of the College, has had no support for reorganizing and eliminating redundancy in courses following the merger (eg. throwing them all under the same acronym as a proxy for reorganization), has resulted in disaffection on the part of faculty/staff, lack of an identifiable mission, general demise of the overall affiliation and identity of member faculty, and so on... So, I agree we have a grave economic crisis but I don't see the

thought and leadership that will see us through. The reorganization should have as its primary goal reorganization of the mission in concert with stakeholders.

49. We already have strong interdisciplinary efforts in major CAES areas, but these could be made even stronger, especially in my areas via coupling ecology, biogeochemisty, and economics.
50. ? not sure what the question is.
51. I hope that they are going to be more meaningful than this one.
52. This survey is pretty useless. The lead-up to Q3 suggests that there no one has a clue about what is core to the college. Q5 assumes that some of us are somehow misplaced in our departments. Q1 suggests you don't realize that some of us have joint appts. Why are you wasting our time with this rather than leading.
53. The strengths of UC Davis in my area of research have been seriously compromised, and I have become involved with projects that span the UC system and campuses nationwide.
54. College need to pay attention to ANR strategic initiatives.
55. A current data base of faculty disciplinary affiliation and subject matter expertise is critical to integrating and building strengths of academic programs and majors as well as planning for new FTEs.
56. The value of the college is in the many specialized areas of expertise we have here. Question 3 seems to artificially limit the future. We need to retain the successful programs even if small.
57. This is a poorly designed survey. No info provided. Do a better job next time. Try a survey along the lines of: If the College were completely reorganized starting from scratch, which of these sound like departments with which you could be affiliated: Conservation science/biology Aquatic systems Animal Biology Agricultural Production etc.
58. Break up departments into centers of excellence - dont try to force existing departments together. Use the financial squeeze as an excuse to rearrange old-fashioned disciplinary areas into new subdisciplines that will address future issues in the environment. To do that, it will be necessary to discern where the cutting edge activity in environmental sciemces will be 20 years from now. Hence, this is not an administrative task but an academic/applied one and will need some considered thought. Rushing into this is a bad idea.

Appendix D

Departmental Information Request (3 pg) - January 5, 2010
College Planning Committee
Due Date: January 21, 2010

The College Planning Committee (CPC) is seeking information from departments as we work to develop recommendations regarding alternative organizational models for the CA&ES that:

1) Define the cutting-edge areas of scholarship of our College;
2) Maintain a world-class reputation of scholarship and leadership in these scholarship areas;
3) Consider impacts on departmental and inter-departmental undergraduate and graduate programs, as well as meeting the mission of Cooperative Extension;
4) To the fullest extent, take advantages of opportunities that may arise because of College reorganization, such as consideration of additional inter-departmental research centers that champion topical research areas across departments.

Although the CPC has access to departmental academic plans, these generally provide the rationale for additional faculty FTE in growth areas. Since the College is planning for a *minimum* FTE reduction of 10% (or more likely 15-20%) within the next 5 years, the CPC is seeking your departmental input on the *highest* priority teaching, research, and outreach programs that you identify to be retained in the College. We hope the questions below will be helpful to engage your departmental faculty in substantive discussions about priorities and opportunities that exist among departments and thus the College as a whole. In your response to the items below, we ask that you bear in mind *the realities of the budget crisis facing our college and report openly on ideas* for planned collaborations among departments to enable the future continuation or development of successful programs despite faculty attrition.

We ask that you distribute this document to your faculty and then at a faculty meeting seek their input and ideas (in particular engaging your newest hires) in addressing the following points. Please keep your responses brief (*bullet listings encouraged*) to allow for straightforward interpretation by the CPC.

A. Teaching:

Please examine the composition of your department's teaching capabilities assuming a smaller department (10% fewer faculty at a minimum) and consider also the expertise of faculty hired during the last 15 years. *Possibly, through existing and new inter-departmental collaborations, the highest priority teaching requirements could be satisfied. We are asking for your input as to what is at risk and also what are the alternatives (other than new hires) from across the College (or entire campus). One could, for example, envision broad majors that include disciplinary areas of emphasis to retain essential specialized courses, even if the college must reduce the number of majors (currently we have 37 majors in CA&ES).* Within that context:

- Please indicate teaching issues of concern, such as core course teaching coverage and teaching workload issues that are going to arise from FTE attrition in the coming years.
- Identify your highest priorities for undergraduate education (e.g., majors, minors, service courses, participation in or development of inter-departmental majors).
- Identify any recent (last few years) or proposed changes in your undergraduate curriculum as a result of priority setting.
- List other College (or campus) departments that could *possibly* assist in the teaching of core or service courses, and delivery of majors, departmental or inter-departmental.
- In addition faculty reductions will likely result in reduced faculty availability for graduate teaching. Please list the graduate programs likely to be affected by attrition in your department.

B. Research:

Anticipated FTE reduction and College reorganization will undoubtedly impact departmental research programs. In addition to maintaining the highest priority disciplinary areas in your department, reorganization could include seeking cross-departmental interdisciplinary collaborations that may lead to successful interdisciplinary grant funding. These could be both within and across colleges:

- List *highest* priority (a) disciplinary, (b) interdisciplinary research areas in your department and indicate the need for corresponding future FTE hires for both (a) disciplinary and (b) interdisciplinary areas. (FTE will be distributed in the coming years, as we accommodate the need for reductions overall). Have you considered FTE that might be hired in more than one department? Are there consolidations your department could consider which would strength two or more department's weaknesses due to attrition to be able to retain a scholarship strength within our College? Please identify possible departments.
- Suggest future new research centers (organized by existing faculty) that would enable interdisciplinary research across departments of the College, despite reduced departmental FTE or any departmental reorganization, and would allow "identities" to remain even if departments change.

C. Outreach:

Given the wave of Cooperative Extension (CE) retirements expected very soon and that in the future the College will have fewer CE resources:

- List the highest priority areas of extension and outreach for retention that (a) meet state needs for stakeholders (b) will sustain/foster the CE/Farm Advisor continuum and (c) align with departmental priorities.
- Have you considered opportunities to realize departmental highest priority areas by organizing outreach centers such as RIC's (Research Information Center,

http://rics.ucdavis.edu/), or via ANR REC's (Research Extension Center, http://danrrec.ucdavis.edu/), or by other suggested means?

D. Strategies:

Please list other strategies being considered by your department to deal with attrition and potential FTE reductions:

- Is the department consulting directly with other departments within the College or seeking collaborations between departments?
- Do you have ideas for a new organizational model involving your department?
- Please provide other relevant comments.

We ask that you submit your departmental responses by January 21, 2010 to Brenda Nakamoto (bvnakamoto@ucdavis.edu) and cc the Associate Deans, Mary Delany (medelany@ucdavis.edu) and Jan Hopmans (jwhopmans@ucdavis.edu). If you have questions, please contact Mary Delany medelany@ucdavis.edu, 2-0233 or Jan Hopmans jwhopmans@ucdavis.edu, 2-8473, or members of the CPC:

Academic Planning Workgroup Agriculture/Food Systems/ Health/Communities (AFSHC)	**Academic Planning Workgroup Environment/Natural Resources/ Planning Design (ENRPD)**
Mary Delany, chair	Jan Hopmans, chair
Linda Bisson	Cort Anastasio
Rick Bostock	Chris Benner
Steve Boucher	Mary Cadenasso
Kent Bradford	Mike Denison
Carl Keen	Doug Larson
Ed Lewis	Sharon Lawler
Joy Mench	Frank Mitloehner
Lisa Miller	Jim Sanchirico
Toby O'Geen	Mark Schwartz
Raul Piedrahita	Dirk Van Vuren
Gang Sun	Stephen Wheeler
Neal Williams	
Glenn Young	

Report to the CA&ES College Planning Committee
from
Department of Agricultural and Resource Economics
January 22, 2010

Summary of Goals

The overall objective of the Department of Agricultural and Resource Economics (ARE) is to maintain top-ranked research and graduate programs while also supporting a large, popular undergraduate program. We feel that our disciplinary basis enables us to maintain a disciplinary teaching program in applied economics, while simultaneously providing a "policy option" that involves joint research with many other departments in the College and also analyses California's links with the international economy.

A. Teaching

Current Undergraduate Resources: ARE has one of the largest undergraduate majors in the college with 850 undergraduate majors and pre-majors. To correct the problem of lecturer expenditure we reduced the number of class offerings and increased the size of our core classes from 120 students to 150-180 students in the 2009-2010 academic year. In the long run the department has to adjust to changing priorities and a substantial anticipated change in the faculty due to retirements in the next 6-8 years.

New Undergraduate Programs: Some of our majors complain about a lack of accounting courses offered since they want to become CPAs. We are also considering a curriculum similar to the Cornell ARE/Business accreditation model. This type of program would be very attractive across the university in attracting students who want to pursue a business career.

Joint Departmental Teaching : Professor Dan Sumner is currently co-teaching a course with the Viticulture and Enology Department. Professor Cynthia Lin, has a joint appointment in ARE and ESP and teaches a course in resource economics. Professor Mérel has developed an upper-division course called "Economics of Sustainability"

Graduate program: ARE offers programs of graduate study leading to the M.S. and Ph.D. degrees. About 15 students enter each program each year. Currently, there are 69 students in the program. Many of our graduate students have multidisciplinary interests, as do many of our faculty. These multidisciplinary interests provide opportunities for us to coordinate with faculty from outside our department to revitalize current courses and develop new courses.

B. Research:

Research Cross Linkages: Given that we are a single discipline department, most of our research is conducted jointly with other departments as shown in Table 1 below. Increasingly, our students seek to complement economics with a solid understanding of the physical or biological environment that surrounds their economic problem. For example, some students interested in environmental economics also study ecology or transportation, some water resource economists also study hydrology, and some development economists also study nutrition. Of the 33 current Ph.D. students who have advanced to candidacy, 12 have dissertation committee members from outside ARE.

Research Relevance: ARE's activities are not only relevant to the core issue topics, but address the key components of a successful program identified by ANR's Program Council. These components

include the “economic and social consequences of the issue”, the environmental/social consequences of the issue”, the “policy impacts related to the issue” and “management approaches for addressing the issue”. Economic analysis is fundamental to ANR’s characterization of the necessary components of high-priority research and extension programs. Maintaining and developing expertise in economics and policy analysis is essential for successfully addressing critical issues. ARE’s core competencies are in precisely these areas.

C Outreach

The outreach responsibility is a primary responsibility of five faculty members with Cooperative Extension (CE) appointments and is an important component of Agricultural Experiment Station (AES) appointments. Communicating research results to stakeholders and interfacing with them is also an important applied research activity for ARE members. Outreach activities of department members communicate the results of applied research to a diverse clientele. Off campus clientele has been defined broadly on state, national and international levels to include policy makers at all levels of government, industry groups including agribusiness, farmers, bankers, educators, consumers, and consultants. Communication methods are similarly diverse including informal meetings, expert testimony, interviews with media, formal presentations and publications of all types. Consequently, outreach activities range from providing expertise in a general subject area to disseminating the results of a specific research project.

D Strategies

Core Competencies: ARE focuses on four core competencies: agricultural economics and policy, development economics, environmental and resource economics, and quantitative economic methods. The department’s efforts to address statewide research priorities and to maintain its position as a top-ranked agricultural economics department requires all of our core competencies. Further reductions in our FTE will result in additional restrictions on our already impacted undergraduate major, and modifications to our highly ranked graduate programs.

Inter-department Collaboration: ARE both subscribes to and receives collaboration with other departments. In addition to our teaching in other departments, we also benefit from Professors Sanchirico and Rose who teach courses in our department.

Administrative Collaboration: We are actively exploring a substantial administrative clustering with another department, and in the short term we have initiated a staff sharing agreement with the ESP department.

Departmental Structure: The ARE department faculty feel very strongly that maintaining the disciplinary cohesion of the department is most important for our research and teaching program, but also for our ability to link our research projects across other CA&ES departments. We note that in the recent survey ARE was ranked high as a potential cooperator by other departments. Paradoxically, it is the concentration of a critical mass in economics that enables us to research and teach effectively with our fellow departments.

Table 1. Examples of Some Integrated Research in Applied economics

Core Issue	ARE Research and Outreach Projects
Invasive species	Management strategies for starthistle in California Management institutions for the olive fruit fly in California Effect of invasive species management and eradication policies in the presence of commodity programs
Pest management	Net benefits of public sector investments in integrated pest management in California Determinants of dormant season organophosphate use in California almonds Economic viability of methyl bromide alternatives for pest control in California strawberries
Food safety	Traceability, legal liability and incentives for food safety
Sustainability and viability of agriculture	Farm management styles and the adoption of biologically integrated farming practices International agricultural trade Effects of dairy policies on returns to producers Increased pollination costs and changes in honeybee disease and pollination regulations Economic and environmental implications of biofuels
Water quality	Economic viability of best management practices for reducing dormant season pesticide runoff in California Estimation of agricultural pollution abatement costs Citizens' willingness to pay for water quality improvements in California
Biosecurity	Foot and mouth disease and trade policy Trade policies and institutions for addressing invasive species
Organic production	Organic produce handlers' relationships with federal marketing orders. Consumer preferences and willingness to pay price premia for organic produce
Air quality	Effectiveness of California smog check program design Economic impact of state regulations to reduce volatile organic compound emissions from pesticides
Land use	Residential development patterns and the recreational and amenity benefits provided by open space
Sustainable use of natural resources	Fisheries management: spatial-dynamic approaches Economic growth and natural resource extraction Economic development and environmental quality
Water supply and allocation	New policy approaches for the Bay-Delta Design of stakeholder negotiations regarding water allocation

January 21, 2010

Department of Animal Science

College Planning Committee Survey Response

A. Teaching:

- Please indicate teaching issues of concern, such as core course teaching coverage and teaching workload issues that are going to arise from FTE attrition in the coming years.

  Pending retirements in key instructional areas include faculty expertise in the equine, aquatic, and avian species, animal welfare, and preventive animal health (e.g., disease, toxicology, and immunology aspects for populations vs. single individuals).

  These are all areas of high student interest and of importance to California stakeholders. Campus-wide the expertise in these areas is reduced with retirements or lacking all together.

- Identify your highest priorities for undergraduate education (e.g., majors, minors, service courses, participation in or development of inter-departmental majors).

  The highest priority for undergraduate education in the Department of Animal Science are the majors within the department.

  Experiential education is key to our major and that includes laboratories at the animal facilities in addition to the more typical classroom laboratories.

  Because of the nature of our major many of our courses do act as service courses for other majors. In that respect service courses play a significant role in our department and are a priority for the department. This is also true for courses that serve both departmental and inter-departmental majors.

- Identify any recent (last few years) or proposed changes in your undergraduate curriculum as a result of priority setting.

  The Animal Science major's curriculum is under review to increase relevance, fill gaps, and adjust to the loss of faculty expertise.

  The low enrollment Avian Sciences major was discontinued. The educational opportunities for students interested in avian biology remain but the resources for maintaining an independent major when the program exists within the Animal Science major were re-prioritized.

  The Animal Science and Management major has been revised frequently to accommodate the attrition of positions on campus.

- List other College (or campus) departments that could *possibly* assist in the teaching of core or service courses, and delivery of majors, departmental or inter-departmental.

  Science majors such as those within the Department of Animal Science rely heavily upon campus service courses for chemistry, math, and biology.

  Wildlife Fisheries and Conservation Biology can provide instruction for core avian science courses and comparative physiology absent in the CBS offering.

  For the economic and managerial courses needed for the Animal Science and Management major, Agricultural and Resource Economics offers courses that meet core instructional demands.

  With greater emphasis on environmental resource allocation for both our students in the revised Animal Science curriculum and the Animal Science and Management major, Environmental Science and Policy could cover relevant topics.

  Previously offered courses in meat science were offered jointly with Food Science and Technology. However retirements in both departments have eliminated that expertise. This does remain an option in the future.

- In addition faculty reductions will likely result in reduced faculty availability for graduate teaching. Please list the graduate programs likely to be affected by attrition in your department.

  Animal Behavior Graduate Group (welfare, behavior faculty)
  Avian Sciences Graduate (avian faculty)
  Ecology (aquatic faculty)

B. Research:

The Department of Animal Science has an integrated, interdisciplinary approach to its research, teaching, extension, and outreach programs. Our core competency is the whole organismal study of domestic and/or wild animals in their respective environments. To address societal concerns related to resource utilization we apply classical disciplinary-based science with diverse approaches including molecular technologies, modeling, in vitro systems, and cell biology to name a few.

Thus the highest priorities for disciplinary (and interdisciplinary) research areas in our department are maintaining the strength of the key disciplinary themes of genetics, physiology, nutrient metabolism, and behavior/welfare. Combined, these create interdisciplinary research themes within the department of agroecosystems, animal management and sustainable animal agriculture systems, animal welfare and well-being, reproduction, growth and development, preventive animal health, food safety, translational animal agriculture, and conservation biology.

These priorities and themes pervade both the research and the instruction of the department.

The recruitments listed below strengthen and build departmental core competencies in both research and teaching and are not listed in any prioritized order. In many cases the “discipline” is not obvious because the recruited individuals will have undoubtedly classical training in one of the disciplines noted above. Notably, these recruitments are truly interdisciplinary:

- Aquatic Animal Biologist
- Environmental Microbiologist
- Immunobiologist (for preventive health concerns)
- Muscle/ Meat Scientist
- Wildlife/Domestic Animal interface (broadly defined)
- Companion Animal Biologist (many different species possible)
- Welfarist
- [for teaching needs, an Equine lecturer to serve UCD students and CSU students]

FTE hired in more than one department often provides challenges to the individual hired. A muscle/ meat scientist would address food safety issues that are also addressed by Food Science and Technology. Faculty with aquatic emphases may be also important to Wildlife Fisheries and Conservation Biology; the same is true for the Wildlife/Domestic Animal Interface position. An Environmental microbiologist may be relevant to the Nutrition Department or to Plant Science. Wildlife/Domestic Animal Interface would be pertinent to Environmental Science and Policy or to Plant Science.

Future new research centers (organized by existing faculty) that would enable interdisciplinary research:

Center for Alternative Feed Sources for Domestic and Captive Animals
Center for Food and Nutrition (focusing in designer foods for a healthy population)
Center for Conservation Biology

C. Outreach:

The new CE proposed below meet the pressing State needs for stakeholders, do in fact foster the CE/Farm Advisor continuum, and most clearly align with departmental priorities noted above:

- Small to Industry Scale Poultry Management Systems & Poultry/Livestock Immunobiology (there is **no** poultry disease person at UCDavis)
- Preharvest Food Safety Microbiologist (could also develop a HACCP training program that is needed within the State)
- Alternative and Urban Farming Systems
- Equine (including welfare, environmental impact in an urban setting, waste, nutrition)
- Agroecosystems (range, restoration grazing, fire suppression, complements the existing IR/AES position in Plant Science)

The department has considered opportunities available through the RIC's and are exploring options. Departmental faculty are engaged in research at the ANR REC's (Hopland, Sierra, and Desert).

D. Strategies:

To meet teaching needs, the department has consulted with other departments within the College. Discussions have also uncovered potential future research collaborations that are exciting, address much needed California societal concerns, and will be pursued.

The Department of Animal Science would like to echo Plant Sciences' view of the importance of the College Special Facilities in serving the research and outreach activities of the College and the UC Davis campus. The opportunities afforded by the College Animal Special Facilities are invaluable in meeting the Land Grant mission both at an undergraduate instructional level and at the basic and translational research level.

Biological and Agricultural Engineering

Teaching
Our highest priorities are to maintain the integrity and vigor of the undergraduate and graduate programs in Biological Systems Engineering (BSE).

It is critical for our department to main degree programs in the College of Engineering (CoE). Otherwise, we are doomed to mediocrity by trying to justify an engineering major outside of an engineering college.

We must continue to develop the fundamental discipline of Biological (Systems) Engineering, under which there are various application areas, such as agricultural engineering, food engineering, biotechnical engineering, biomedical engineering, etc.

Even though biomedical engineering is an application area under the general discipline of biological engineering, a separate department of Biomedical Engineering was recently created at UC Davis. Given this political landscape, we (BAE) must not compete with the activities of this department. They focus on engineering problems in human medicine. Our focus should be on all other engineering problems in the life sciences.

BAE Faculty teaching loads in the CoE are disproportionately large considering the I&R FTE from that college, and disproportionately small in CA&ES based on their FTE. But on average, our teaching loads are similar to most other faculty in CA&ES.

Reduction in faculty numbers by 10-20% over the next few years will likely push the average number of courses our faculty teach to closer to 3/yr, which will take time from AES activities.

We have considered the development of biological systems technology major in CA&ES to parallel the major in the CoE, but current teaching loads in BSE and the prospect of reduced faculty numbers have put this discussion on hold.

We have discussed the possibility of developing new general education courses in CA&ES or teaching existing courses with large general audiences.

With the contraction of FTE to cover required undergraduate courses, it is becoming increasingly difficult to expand or even maintain the offerings of graduate courses in BSE. This has a negative impact on the graduate program.

We think that there are synergistic opportunities for program development between our technology courses (ABT) taught at the Western Center for Agricultural Equipment and courses taught at the Student Farm. Land adjacent to the West Village complex might serve as a venue to show-case student and college activities.

Research

Our department combines two fundamental and over-lapping areas of research – biological engineering and agricultural engineering. In so doing, we stay moored with our colleagues in both colleges and also grounded in mission-oriented research within the AES. Our greatest long-term concern is preserve the balance between these areas. Our youngest faculty tend to the biological engineering area, while are more senior faculty tend to agricultural engineering.

Over the next five years and with the proposed reduction in FTE, we are in danger of losing a critical mass of faculty expertise in agricultural engineering and mechanization.

Relevant excerpts from our current Academic Plan:

Overview

The Department of Biological and Agricultural Engineering is internationally recognized by peer institutions, potential students, and industry professionals as a foremost center for biological and agricultural engineering in the United States. The department's foundations are fundamental and applied engineering research, problem solving, education, and outreach related to materials, processes, design and development for production and use of biological and agricultural materials. The department mission is **to discover, develop, apply, and disseminate knowledge for the sustainable production, management, and use of biological materials, and to educate students for this work.**

The department integrates engineering, biological, and agricultural disciplines to perform interdisciplinary research and education in fields that are undergoing rapid transformation at both the fundamental and applied levels. The unifying theme of the department's mission is the production and management of biological materials and processes, particularly under the resource and environmental constraints of the western U.S. The department's research mission addresses the full continuum from discovery to implementation and application.

Research Areas

The Department of Biological and Agricultural Engineering currently has programmatic strengths in four general areas of research:

- *Agricultural Engineering* - precision agriculture, equipment and system development, instrumentation, ergonomics, waste management
- *Biological Engineering* - biotechnology, bioprocessing, bioenergy, biosensing
- *Food Engineering* - processing, packaging, human health
- *Natural Resources Engineering* - water, land, air, forest

Agricultural Engineering and Food Engineering have long been the department's premier research areas and the basis for its world renown, and will continue in the future. Biological Engineering research has gained considerable attention and visibility over the past 15 years, and the current crisis in energy supplies has put the department's research programs in bioenergy on display around the nation and world. Although energy currently dominates the political and social discussion, the department's long-standing expertise in Natural Resource Engineering will inevitable come to center stage as the population of California grows, its climate changes, and water becomes ever more scarce.

Faculty Resources and Future Requests

Considering the demographics of the department and estimating retirements in the next five to ten years, we are certain to lose individuals who contribute substantially to our excellence in three of the four areas with current programmatic strength. Expected retirements in these vulnerable areas (including recent actual retirements) are:

- Agricultural Engineering (JAM, JFT, SKU, REP, MJD, DKG, RHP)
- Food Engineering (RPS, JMK)
- Natural Resources Engineering (DJH, WWW, MAM, BRH)

It is clear that Agricultural Engineering will sustain the greatest loss at a time of increasing industry demand. In Food Engineering we will lose two of our highest visibility faculty, including a member of the National Academy of Engineers. And during a period of great uncertainty in the state's water resources management, most of our current faculty will have retired.

Considering these projections and the departmental goals, our priority of faculty position requests in the next five to ten years is the following:

1. **Agricultural Engineers** - cluster hire of research faculty (AES/IR) and extension faculty (CE/IR) in mechanization and precision agriculture – to launch the Center for Agricultural Engineering
2. **Water Resources Engineer** – water use efficiency, irrigated agriculture
3. **Food Engineer** – food processing and safety – majority appointment in BAE and housed in Bainer

We envision the future development of a **UC Center for Agricultural Engineering**, to be housed at the Western Center for Agricultural Equipment. The vision of the center would be to advance agricultural engineering in California, the western United States, and the Pacific rim. Its mission would be to (1) foster innovative, sustainable, and profitable developments in agriculture through engineering research; (2) insure future advancements in agriculture by education of undergraduate and graduate engineers; (3) disseminate technical knowledge to stakeholders in agriculture through outreach activities; (4) address the needs of industry by technological innovation and training partnerships; (5) inspire young people to pursue studies in the science, engineering, technology, or teaching of agriculture. How we will make this happen in such a bleak economic climate is unclear, but we hope to have the assistance of the development office in CA&ES.

Outreach

BAE is in critical need of new FTE in Cooperative Extension. Currently we have 1 CE specialist, and he will retire at the end of June.

Critical areas requiring extension expertise in engineering to meet state needs in the next 20 yrs:

- mechanization and automation in specialty crop production
- post-harvest engineering
- renewable energy
- energy efficiency
- water resources and irrigation
- pest and weed control in specialty crop production

CE expertise is also critical in food engineering to work with the food processors in the state, but these FTE have traditionally been housed in FS&T. There is an opportunity for joint appointments in these areas, particularly as the focus shifts to foods for health.

Strategies

CA&ES faculty and departments can be generally grouped into 5 areas of excellence. Four of these areas are relatively discrete (food, agriculture, environmental biology, and natural resources), but one group intersects all of the areas and cannot be neatly lumped into 1 of the other 4. This intersectional group includes BAE, ARE, and the various human sciences departments.

Because of the intersectional nature of the research and outreach activities in BAE, collaboration or combination of academic programs with another department or unit would create more problems than it would solve by pooled FTE mass. As it stands now, we have joint appointments in LAWR, PLS, and FS&T – covering 3 of the 4 discrete areas mentioned above.

Maintaining our degree programs in the CoE is critical for their excellence and national competitiveness. This does not allow us much opportunity for pairing in CA&ES.

The uniqueness of our mission-oriented research program and appointments in the AES makes it just as unlikely (and undesirable) for combining academic programs with CoE units.

Whereas we do not feel it would be beneficial to combine academic programs with other units in CA&ES or CoE, we do think it would be beneficial to combine some elements of our business operations with other units to create a larger core business office. This could happen in either college.

The benefit of combining business operations with other some other department(s) in CA&ES is that they understand the concept of the AES and all of the complexity of CA&ES. The disadvantage is that this isolates us from our engineering colleagues.

The benefit of combining business operations with departments in CoE is one of geography and common degree programs. The disadvantage is that they have little knowledge and experience with the AES.

We have had some very preliminary discussions with FS&T about administrative clustering. We have also discussed developing a Bainer Hall administrative cluster with Mechanical Engineering and Chemical Engineering. We do not think that an administrative cluster with other engineering departments in Bainer Hall is a repudiation of our connections with CA&ES. It just may make good business sense. We have no long-term ambition of leaving the CA&ES fold; quite to the contrary.

We (BAE) are concerned about getting caught in a tug of war between CA&ES and CoE as they pursue separate and different approaches to streamlining business operations.

Entomology

January 21st, 2010

To: College Planning Committee

Re: Departmental Information Request

Fr: Department of Entomology

Faculty in the Department of Entomology met on January 12 primarily to develop a response to this request from the College Planning Committee. It is clear that there is much more discussion needed at the Department, College and campus levels, but what is reported below will serve at Entomology's initial thoughts surrounding the future of our teaching, research and outreach/engagement/extension. As requested, each section is reported using bullet points.

Teaching

- Entomology prides itself on delivering courses for our own undergraduate and graduate students, but we also offer courses that contribute more broadly to undergraduate/graduate education on the campus including courses in SAS, EVE, ABI and BIS. We also contribute broadly to courses in ETX and PLS. In addition, faculty have been involved in teaching ENT140S (*Biodiversity and Society in South Africa*) through the Quarter Abroad Program.
- This interdisciplinary aspect of our teaching will remain a priority and we will continue leadership in these areas
    - With the addition of several new faculty members we expect to resurrect Ent. 105 (*Insect Ecology*), Ent. 212 (*Molecular Biology of Insects and Viruses*) and *Pollination Ecology* within the new *Sustainable Agriculture and Food Systems Curriculum*
    - With a new NIH training grant involving Entomology, the Vet School and the Medical School, we will resurrect Ent. 214/253 (*Vector-Borne Infectious Diseases/Advanced Medical Entomology*)
    - Ent. 123 (cross listed with PLP and PLB 123) will be moved to winter quarter and we will be (once again) engaged in teaching this
    - At least one of our new faculty will teach EVE 180 (*Experimental Ecology and Evolution in the Field*) and this will be cross-listed with Entomology.
    - We are interested in pursuing trans-UC courses and are taking a leadership role in doing so (i.e., with SAS 7 *Terrorism and War*).
    - At this point expanding to on-line courses to generate revenue and reach a broader audience is not something we have the capacity to do.

- We are beginning discussions of how to consolidate offerings in the department and in some interdisciplinary areas.
    - There is concern over our continuing role in the *Animal Biology Major*.

    - At this point, we have no one to teach Ent. 119 (*Apiculture*). Ent. 123 and Ent. 230 (*Advanced Biological Control*). .
    - Three faculty retirements in 2010 will jeopardize the second offering of ENT. 100 (General Entomology), Ent 103 (Insect Systematics), and Ent 2 (Biodiversity). It is possible that Ent. 103 could be replaced or cross-listed with EVE 103 with no Entomology faculty involved
- We currently have a Cooperative Extension Specialist and a 100% AES scientist teaching primary Entomology courses, and we plan to pursue teaching appointments for these individuals

Research

- Research in the Department spans most of the areas of emphasis designated by within the college including Agriculture Productions Systems (Sustainable Agriculture); Food (systems), Human Health and Welfare; Natural Resource Science and Management; Ecosystem Function and Management
- Clusters of Excellence and Core Competencies in the Department include:
    - **Biodiversity**. The department has one of the strongest programs in the country on insect biodiversity, with a focus on systematics, biodiversity, evolution and environmental assessment. The Bohart Museum of Entomology is the cornerstone of this program, housing the seventh largest insect and arthropod collection in North America.
    - **Ecology**. This group focuses on the whole insect and its environment, with particular emphasis on behavioral and community ecology and demography. Most of the faculty members in this group are also members of one or more of UC Davis' nationally-ranked graduate programs, including the Center for Population Biology and the Graduate Groups in Ecology and Animal Behavior.
    - **Functional Biology**. Research programs in the department integrate insect molecular ecology, physiology and chemical ecology using a strongly collaborative approach both within the department and among other departments and colleges. This group has a large number of major, high profile programs supported by NIH, NSF, USDA, and DOE.
    - **Sustainable Agriculture**. This is one of the department's greatest strengths, with specialization in invasion biology, biological control, insect pathology, urban entomology and apiculture.
    - **Vector Biology**. Research programs in medical and vector biology integrate molecular biology, physiology and ecology in an integrative, collaborative approach. This group includes several large high profile programs on malaria and dengue fever virus, which are supported by national agencies such as NIH, NSF and the Gates Foundation.
- Administrative clustering is a certainty, and we are proceeding with looking at the feasibility of doing this with Animal Science
    - We have openly discussed potential academic mergers with the *Departments of Nematology, Environmental Toxicology,* and *Wildlife,*

Fish and Conservation Biology. From our perspective, these remain viable options.

- Joint appointments are welcome in the department. We have discussed the possibility of linking our need for an insect-plant interaction faculty member with the need in the Department of Plant Sciences for a Plant Physiologist all of which might focus around plant breeding. We have been in discussions with Plant Sciences about such a joint position
- The departmental 'wish' list for new hires focuses on positions that will add to the core competencies listed above and reinforce the overall areas of emphasis in the college
    - Apiculture: addresses the needs in sustainable agriculture and (depending on the hire) would connect with the department's excellence in functional biology and/or behavioral ecology. Such a position would fill and important teaching role in the department and on campus. There is considerable stakeholder interest and an important AES outreach component to such a position in addition to substantial funding opportunities at the state and national levels
    - Invasive species/biological control: reinforces the College's greater focus on the urban environment (via the creation of the CCUH) and address one of the major issues facing agriculture and the urban environment. This would address teaching issues due to faculty retirement
    - Insect/Plant Interactions: discussed above as a possible joint position with the Department of Plant Sciences
    - Biodiversity/Systematics: the impending retirement of two insect systematists, including the Schlinger Endowed Chair in Insect Systematics, is of considerable concern to the department from a research and teaching perspective.
- Several levels of re-organization in the college were discussed
    - There was disagreement on whether there needs to be a name change and possible rearrangement of the college. While out of the scope of this request from the CPC, it should be mentioned that some faculty felt very strongly about this.
    - A novel approach would be to develop a framework for more easily creating small "virtual" organizations (i.e. research "networks"), perhaps as a kind of minor leagues for larger centers and institutes, or as a rapid response to emerging areas of research, or as pilot projects to get ideas off the ground. A model for these might be something like the working groups at NCEAS, the National Center for Ecological Analysis and Synthesis - an interested faculty might organize a group, propose an idea, and be granted some minor funds, the services of a website designer and a "research network" title. Again, the really interesting part would be to see what new research directions could emerge from this framework.

Cooperative Extension/AES Engagement & Outreach

- We have two major outreach components of the Department: The Bohart Museum of Entomology and the Harry Laidlow Bee Biology facility. We anticipate the outreach function of each of these to increase in the coming years
    - The department currently employs a full time staff person associated with our outreach effort
    - We are concerned about the pending retirement of our CE specialist in apiculture, as this is a critical area of cooperative extension in the department
- We recently lost two faculty with partial CE appointments associated with UC IPM and the UC Mosquito Program
- We would like to consider teaching appointments for one of our 100% AES scientists and for one of our CE specialists.
- The Department plans to engage more fully with existing centers on the campus including (but not limited to) the CCUH, the ASI, RICs in the Plant Sciences and programs within ANR such as UC IPM.
- There may be opportunities for Endowed Chairs from commodity groups when some or our more field-oriented faculty retire
- The department plans for more engagement with ANR county advisors; we anticipate more 'Associate' appointments for these individuals in the department are working toward this
- We see the need for a CE position in the area of Medical/Veterinary Entomology.
    - With the loss of the UC Mosquito Program, there is dramatic need for a CE connection to the strong research programs ongoing in Entomology, and the Vet and Medical Schools. Emerging diseases are a huge issue in the state and a priority for every Mosquito Abatement District in California. A joint appointment with Animal Science and/or the Vet School would be welcomed. That dialog has not been started.

Departmental Information Request (3 pg) - January 5, 2010
College Planning Committee
Due Date: January 21, 2010

The College Planning Committee (CPC) is seeking information from departments as we work to develop recommendations regarding alternative organizational models for the CA&ES that:

1) Define the cutting-edge areas of scholarship of our College;
2) Maintain a world-class reputation of scholarship and leadership in these scholarship areas;
3) Consider impacts on departmental and inter-departmental undergraduate and graduate programs, as well as meeting the mission of Cooperative Extension;
4) To the fullest extent, take advantages of opportunities that may arise because of College reorganization, such as consideration of additional inter-departmental research centers that champion topical research areas across departments.

Although the CPC has access to departmental academic plans, these generally provide the rationale for additional faculty FTE in growth areas. Since the College is planning for a *minimum* FTE reduction of 10% (or more likely 15-20%) within the next 5 years, the CPC is seeking your departmental input on the *highest* priority teaching, research, and outreach programs that you identify to be retained in the College. We hope the questions below will be helpful to engage your departmental faculty in substantive discussions about priorities and opportunities that exist among departments and thus the College as a whole. In your response to the items below, we ask that you bear in mind *the realities of the budget crisis facing our college and report openly on ideas* for planned collaborations among departments to enable the future continuation or development of successful programs despite faculty attrition.

We ask that you distribute this document to your faculty and then at a faculty meeting seek their input and ideas (in particular engaging your newest hires) in addressing the following points. Please keep your responses brief (*bullet listings encouraged*) to allow for straightforward interpretation by the CPC.

A. Teaching:

Please examine the composition of your department's teaching capabilities assuming a smaller department (10% fewer faculty at a minimum) and consider also the expertise of faculty hired during the last 15 years. *Possibly, through existing and new inter-departmental collaborations, the highest priority teaching requirements could be satisfied. We are asking for your input as to what is at risk and also what are the alternatives (other than new hires) from across the College (or entire campus). One could, for example, envision broad majors that include disciplinary areas of emphasis to retain essential specialized courses, even if the college must reduce the number of majors (currently we have 37 majors in CA&ES).* Within that context:

- Please indicate teaching issues of concern, such as core course teaching coverage and teaching workload issues that are going to arise from FTE attrition in the coming years.
- **Environmental Policy is our greatest concern (3 FTE will be lost by 7/1/10)**
- **As a result, we will find it difficult to cover core course teaching for EPAP and ESM majors and grad group teaching, or to serve the demand from other College majors for exposure to policy processes in land use planning, public lands, environmental impact analysis, transportation policy, etc.**
- **We received 4 initiative hires in last two years but these don't meet all of our specific teaching needs and are helping out in other departments/programs (e.g., Sanchirico is teaching ARE 254, Springborn is teaching ESP 162 which replaces an ARE course)**
- **Other areas at risk include:**

  - **Environmental planning**
  - **Aquatic ecology**
  - **Ecophysiology (lost at the college level)**

- Identify your highest priorities for undergraduate education (e.g., majors, minors, service courses, participation in or development of inter-departmental majors).
  - **The new Environmental Science and Management major (already an inter-departmental major)**
  - **Environmental Policy and Planning major**
  - **Better integration of ESP courses into other CAES majors**
  - **More consolidation of environmental majors in CAES and their associated specialized courses**

- Identify any recent (last few years) or proposed changes in your undergraduate curriculum as a result of priority setting.
  - **Creation of the highly interdisciplinary Environmental Science and Management major with LAWR to better integrate biological, physical, and environmental science and policy. It was originally conceived as an environmental sciences "umbrella major" able to serve additional environmental subject areas, and was designed with extendibility in mind.**
  - **Reorganization of the Environmental Policy and Human Ecology AOE within the Graduate Group in Ecology to provide better integration of the social sciences across campus**

- List other College (or campus) departments that could *possibly* assist in the teaching of core or service courses, and delivery of majors, departmental or inter-departmental.
  - **WFCB (animal ecology/conservation)**
  - **ARE (some policy courses, C. Lin already helps out here. J. Sanchirico in ESP teaches a course for ARE)**
  - **Law School (Environmental Law, already get help and have consolidated our law course with LAWR)**
  - **EVE (General Ecology, upper level ecology, already teach Introductory Biology with them)**

- In addition faculty reductions will likely result in reduced faculty availability for graduate teaching. Please list the graduate programs likely to be affected by attrition in your department.
  - **GGE (largest ecology graduate training program in the world and an important part of the identity of UC Davis)**
  - **GGE is strong overall, but particular subdisciplines are at risk, e. g. Ecophysiology, Environmental Policy and Human Ecology**
  - **ESP does disproportionate share of teaching in GGE**
  - **Incentives needed for other departments to teach more**
  - **Other programs affected by attrition in ESP**
    - **Hydrological Sciences**
    - **Geography**
    - **Community Development**
    - **Transportation Technology and Policy**

B. Research:

Anticipated FTE reduction and College reorganization will undoubtedly impact departmental research programs. In addition to maintaining the highest priority disciplinary areas in your department, reorganization could include seeking cross-departmental interdisciplinary collaborations that may lead to successful interdisciplinary grant funding. These could be both within and across colleges:

- List *highest* priority (a) disciplinary, (b) interdisciplinary research areas in your department and indicate the need for corresponding future FTE hires for both (a) disciplinary and (b) interdisciplinary areas. (FTE will be distributed in the coming years, as we accommodate the need for reductions overall). Have you considered FTE that might be hired in more than one department? Are there consolidations your department could consider which would strength two or more department's weaknesses due to attrition to be able to retain a scholarship strength within our College? Please identify possible departments.
- **Highest priority research areas:**
    - **Environmental Policy with faculty from ARE, LAWR, WFCB. FTE hires: Policy scientists who study the policy process. Should be hired in ESP to replace retirements and maintain our critical mass**
    - **Biodiversity, sustainability and global change with faculty from ESP, WFCB, Plant Sciences, EVE, Entomology, Nematology. FTE hires: Aquatic Ecology, Ecophysiology both through college level hires.**
- Suggest future new research centers (organized by existing faculty) that would enable interdisciplinary research across departments of the College, despite reduced departmental FTE or any departmental reorganization, and would allow "identities" to remain even if departments change.

- **Attract the National Center for Ecological Analysis and Synthesis for which NSF is currently soliciting pre-proposals.**
- **Other suggested research centers following from the CAES Strategic Plan:**
    - **Biodiversity, sustainability and global change with WFCB, Plant Sciences, Entomology, Nematology and possibly Animal Sciences**
    - **Environmental and natural resource policy with WFCB, ARE, LAWR**
    - **Environmental Informatics with Plant Sciences, LAWR, Computer Science**

C. Outreach:

Given the wave of Cooperative Extension (CE) retirements expected very soon and that in the future the College will have fewer CE resources:

- List the highest priority areas of extension and outreach for retention that (a) meet state needs for stakeholders (b) will sustain/foster the CE/Farm Advisor continuum and (c) align with departmental priorities.

    - **Priorities should focus on regional and global change, e. g. ecological restoration, sustainable development and resource management**
    - **CE/Farm advisor system needs to move toward agricultural linkages to natural environments and urban communities to encourage buy-in from environmentalists and urban dwellers**

- Have you considered opportunities to realize departmental highest priority areas by organizing outreach centers such as RIC's (Research Information Center, http://rics.ucdavis.edu/), or via ANR REC's (Research Extension Center, http://danrrec.ucdavis.edu/), or by other suggested means?

- **A proposed NSF-funded national center in Environmental Decisionmaking, headed by DESP faculty, is in final stages of review and will have considerable outreach functions if funded.**

D. Strategies:

Please list other strategies being considered by your department to deal with attrition and potential FTE reductions:

- Is the department consulting directly with other departments within the College or seeking collaborations between departments?
  - **Developed new ESM major with LAWR**
  - **Discussions with WFCB about a Biodiversity, sustainability and global change research center**
  - **Planning for new environmental informatics programs and curricula with LAWR and Plant Sciences**

- Do you have ideas for a new organizational model involving your department?
  - **We believe ESP is already on the right track putting a high value on interdisciplinarity across the natural and social sciences. Furthermore, our recent initiative hires all mentioned that our balanced natural/social science mix was extremely attractive to them and tipped the balance in favor of UC Davis.**
  - **One possibility for an organizational model is to maintain ESP as a viable department and to allow faculty interested in interdisciplinary research in environmental science and policy to join us subject to approval by a majority of our faculty**

- Please provide other relevant comments.
  - **Big problems need team science and it is essential that ESP maintains a critical mass of faculty in science and policy to encourage effective synergies for addressing these problems. We are losing a large chunk of our policy faculty (3 FTE) in a single year and it is important that they be replaced to maintain our balance and the intellectual environment necessary for effective collaboration.**

We ask that you submit your departmental responses by January 21, 2010 to Brenda Nakamoto (bvnakamoto@ucdavis.edu) and cc the Associate Deans, Mary Delany (medelany@ucdavis.edu) and Jan Hopmans (jwhopmans@ucdavis.edu). If you have questions, please contact Mary Delany medelany@ucdavis.edu, 2-0233 or Jan Hopmans jwhopmans@ucdavis.edu, 2-8473, or members of the CPC:

Academic Planning Workgroup Agriculture/Food Systems/ Health/Communities (AFSHC)

Mary Delany, chair
Linda Bisson
Rick Bostock
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Kent Bradford
Carl Keen
Ed Lewis
Joy Mench
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Raul Piedrahita
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Frank Mitloehner
Jim Sanchirico
Mark Schwartz
Dirk Van Vuren
Stephen Wheeler

Departmental Information – Environmental Toxicology

For – College Planning Committee

January 21, 2010

A. Teaching:

- The ETX undergraduate major is unique in the UC System; over the past 5 years the number of majors have increased to over 100 and course enrollments have nearly tripled.
- ETX currently consists of 11 faculty members: Cherr, Denison, Gaikwad, Matsumura, Miller, Oteiza, Rice, Shibamoto, Tjeerdema, Wood, and Zhang.
- Assuming a teaching load of 2 courses/year, the current teaching capacity is 22 courses/year.
- The undergraduate major consists of 7 required, and 12 elective, ETX courses.
- ETX also offers 12 graduate-level courses in support of at least 3 graduate groups: Pharmacology & Toxicology, Agricultural & Environmental Chemistry, and Forensic Sciences.
- Courses that are focused on legal aspects or risk and exposure assessment/management are purposely taught by adjunct faculty members, as these classes are more effectively taught by practicing experts in these areas.
- Based on discussions with ETX faculty, during the next 5 years only one faculty member (Shibamoto) is likely to retire, representing a reduction to ~10 faculty members.
- Assuming a worst-case scenario of a 20% reduction (e.g., Shibamoto and Matsumura retiring), ETX would still consist of 9 faculty members (the same number it essentially had for the past 10 years). Over the past 20 years, while ETX has ranged from 6 to 11 faculty members, it has consistently maintained its excellence in research, teaching and outreach.
- Even with a worst-case scenario of 2 faculty retirements, the department will still be able to provide an excellent program to its undergraduates and would be able to meet all of its undergraduate and graduate teaching commitments. Additional teaching would be picked up by our recent hires (Gaikwad and Zhang), fully covering the faculty teaching loss in that case.
- If future course reductions are required, our highest priority would be to maintain our required undergraduate courses, and introductory and/or low-enrollment electives could be discontinued or taught by adjuncts.
- In addition, we have initiated discussions within the ETX department regarding the possibility of establishing interdepartmental undergraduate/graduate classes that could serve teaching needs and/or requirements of ETX and other departments. This would provide an avenue in which to expand the availability of courses in a time of faculty reductions.

B. Research:

- Environmental toxicology is a multidisciplinary science that blends toxicology and environmental chemistry and these represent our highest priority disciplinary and interdisciplinary research areas. Between 5 and 10 years it is anticipated that new FTEs in toxicology (molecular/biochemical mechanisms) and environmental chemistry (fate processes and transformations) would be needed.
- Assuming a worst-case scenario during the next 5 years, with our 2 recent hires now on campus ETX would neither lose major areas of research expertise or important research centers.
- While within the College toxicology is unique to ETX, new environmental chemists may be jointly appointed between ETX and LAWR to fulfill the needs of both programs.

- New College programmatic areas (or priority areas within the new programmatic areas) could double as centers for new research. Similar to the umbrella structure of graduate groups, departments could be members of more than one programmatic area, and these programmatic priority areas can be dynamic, evolving over time in response to changes in research needs.

C. Outreach:

- The highest departmental priority for extension and outreach is in pesticide use and impacts.
- ETX currently has 1 CE specialist. However, for the past 5 years he has also served as director of the UC Sierra Foothill Research & Extension Center, thus contributing only a part of his time to departmental activities.
- To maximize outreach in our area of need, ETX collaborates with other land-grant campuses (Cornell, Idaho, Michigan State, Oregon State) to support the website http://extoxnet.orst.edu/. It provides information to the general public and agricultural community on the health effects and environmental fate of pesticides used in the US.
- ETX also continues to manage the USDA-funded Western Region IR-4 Program, which develops analytical strategies for the management of pesticides used in agriculture (e.g., minor-use crops).

D. Strategies:

- ETX is the oldest department of its type in the world, with UCD a key contributor to the origin and development of this multidisciplinary scientific discipline.
- Over the past 10 years ETX has consisted of up to 11 faculty members and 1 CE specialist – and during that time the department has been extremely successful and continues to lead the field.
- Similar successful ETX undergraduate/graduate programs in other universities generally consist of 8 to 10 faculty members (and a varied number of adjuncts). Thus, we believe the statement that departments need to be large to be viable and successful is not valid in this case and should be evaluated on a department by department basis.
- In 2009, 2 new faculty members were recruited – effectively serving as early replacements for the next 2 retirements. Thus, the department is stable for at least the next 5 years even with a 20% reduction in faculty (to ~9 members). There may be opportunities to increase the faculty number via transfer from other departments (i.e., from those recommended by the APC report for "redistribution" and/or from existing departments as suggested by the dean).
- Other organizational models have been explored with several departments within the College, including Entomology, Nutrition, WFCB and LAWR. However, ETX may be the most interdisciplinary department in the College – with faculty specializing in many areas of toxicology (molecular, food, nutritional, reproductive, aquatic, inhalation, dermal), as well as environmental fate processes, air pollution, pesticide impacts, etc.
- While synergies clearly exist with nearly every department in the College (as supported in the recent College survey), there appears to be no optimal merger opportunity that would foster or enhance the department's current level of success. Therefore, we believe the strongest position for ETX would be for it to remain as an independent department but administratively clustered with other departments in the environmental sciences (depending on the recommendations of the Administrative Clustering Advisory Committee). ETX would increase its focus on continuing to foster and develop research and teaching synergies with other departments and programs within the College.
- With a rapidly expanding global population, concerns over the impacts of agricultural and other human activities on environmental quality will intensify. Therefore, we believe the College would be best served by a visible, productive and independent ETX department.

CPC Questionnaire Response
Food Science and Technology

A. TEACHING

- **Please indicate teaching issues of concern, such as core course teaching coverage and teaching workload issues that are going to arise from FTE attrition in the coming years.**

The Department of Food Science & Technology (FST) at UC Davis has 7.10 I&R and 7.05 OR FTE faculty. With these 14.15 FTE faculty, FST:

- serves the highest *Food Science major enrollment (~200) in the U.S.*
- provides several *courses required by programs in the Dept. of Nutrition (NUT)* and listed as restricted electives in other programs (e.g., VEN, EBS, ECM)
- offers several *lower-division courses taken by almost 3,000 students each year* (FST 1 – Principles of Food Science, FST 3 – Introduction to Brewing and Beer, FST 10 – Food, Folklore & Health), thus bringing the mission of the CAES to a large percentage of the campus student body. *Overall, the FST teaching program delivers over 13,700 student credit hours per year, benefiting both the department and the college.*

Our Food Science B.S. degree is accredited/approved by the Institute of Food Technologists (IFT). In the coming years, it is imperative that FST maintain the ability to provide core, required courses that provide core competencies required by IFT for our Food Science majors. The UC Davis Dept. of FST is also distinguished by being the *only Food Science department in the Univ. of California* system and *the only Food Science department granting a Ph.D. in California.*

FST has recently (2008 and 2009) lost three faculty members (David Ogrydziak, Chet Price and David Reid) to retirement and has an additional retirement (John Krochta) announced for 2011. These four retirements constitute a 25% reduction in Academic Faculty members based on the 2008-09 academic year. However, the hiring of one faculty member (Maria Marco) through provost approval and the recent acquisition of several partial-appointment faculty (Nitin Nitin, Bill Ristenpart and Carolyn Slupsky) through the Foods for Health Initiative have helped our ability to continue providing the core required courses for our Food Science major.

The anticipated retirement of one faculty member (John Krochta) in 2011 will represent a 7.5% reduction in faculty based on present faculty members. *One additional retirement in the next several years (producing an overall 15% reduction in Academic Faculty based on present faculty members) will begin to impact severely on teaching workload. Based on demographics, FST could lose up to four additional faculty members in the next five years.* Any loss beyond the one anticipated retirement (representing a 7.5% faculty reduction) would limit our department's ability to continue providing FST 10 (Food, Folklore and Health) each quarter and both summer sessions to the ~2000 students (6000 SCH) who take it each year. This would be a severe loss to our college and campus.

- **Identify your highest priorities for undergraduate education (e.g., majors, minors, service courses, participation in or development of inter-departmental majors).**

  The highest priority in undergraduate education for FST is maintenance of our IFT-accredited/approved Food Science major.

  In addition, *FST provides courses and labs in Food Chemistry (FST 100A, FST 101A) and Food Properties (FST 100B, FST 101B) that are required by programs in Department of Nutrition* (NUT). We hope to have the resources to continue providing them to NUT.

- **Identify any recent (last few years) or proposed changes in your undergraduate curriculum as a result of priority setting.**

  Recent changes:

  In response to faculty retirements in recent years, FST has lost ability to teach several courses that had served as restricted elective choices for our Food Science majors. These courses have included FST 108 (Food Plant Sanitation), FST 120 (Meat Science), FST 150 (Heat Processing) and FST 151 (Food Freezing). These courses enriched our Food Science major, but by dropping them we have maintained ability to teach higher-priority required, core courses.

  Proposed changes as a result of priority setting:

  FST 1 (Food Science Principles): drop this course due to loss of temporary college support provided due to a retirement (David Reid).

  FST 10 (Food, Folklore and Health): reduce frequency of offering this course due to loss of temporary college support, especially if retirements exceed one faculty member in the next several years.

  FST 47 (Food Product Development Field Study): change from field trip/tours to on-campus seminar series provided by industry colleagues to save cost of transportation and reduce faculty time commitment.

  FST 108 (Food Plant Sanitation): collaborate with VEN to offer this important course to both FST and VEN students.

  FST 131 (Food Packaging): drop course from restricted elective list and add coverage of this topic to other course(s).

  Other curriculum-related changes:

  Co-location of FST and VEN allows us to share facilities and provides enhanced ability to offer courses to students. *VEN has agreed to FST using VEN teaching labs to allow larger (and thus fewer) sections of food microbiology lab. FST has agreed to VEN using the FST Food Innovation Lab to support VEN sensory courses*.

Clustering of FST and VEN administrative functions has led to *VEN sharing undergraduate and graduate staff advisors with FST*, since both of the FST advisors recently retired.

The *new Brewery will enhance the Brewing Science option* within the Food Science major.

The new *Food Processing Lab will allow conduct of processing-related labs in a modern, food-grade setting*.

The *new facilities are also being planned to allow live video feed* of equipment and processing demonstrations to classrooms to enhance student learning.

- **List other College (or campus) departments that could *possibly* assist in the teaching of core or service courses, and delivery of majors, departmental or inter-departmental.**

  FST and VEN each offer courses in chemical analysis, microbiology, sensory science and processing. The co-location and disciplinary parallels between FST and VEN also provide opportunities for providing *a safety net for each other in the cases of sabbaticals, faculty illness or other events leading to loss of faculty.* However, *VEN's courses focus on wine*, while *FST's courses deal with food more broadly*. Thus, while some mutual assistance is possible, *any major re-alignment would weaken the majors* provided separately by the departments.

  Since FST is a multi-disciplinary department consisting of chemists, microbiologists, sensory and consumer scientists, and engineers, we may be the logical home of faculty from smaller programs that are discontinued.

- **In addition faculty reductions will likely result in reduced faculty availability for graduate teaching. Please list the graduate programs likely to be affected by attrition in your department.**

  Recent and anticipated retirements are also requiring priority setting in course offerings for students in the Food Science M.S. and Ph.D. programs. Other graduate programs such as Agricultural and Environmental Chemistry will also be affected.

  Proposed changes to FST graduate course offerings due to priority setting:

  FST 202 (Chemical and Physical Changes in Food): *involve new FFHI faculty member* (Bill Ristenpart) as alternating instructor, thus increasing availability of course to students.

  FST 203 (Food Processing): restructure this core course, required of Food Science M.S. and Ph.D. students, *to incorporate material relevant to the Foods for Health Initiative*, with eventual instructor a new faculty FFHI faculty member (Nitin Nitin)

  FST 205 (Industrial Microbiology): *drop this elective course* due to loss of instructor to retirement

  FST 210 (Proteins: Functional Activities and Interactions): *drop this elective course* due to instructor transferring to teaching of a core, required graduate course because of another retirement

FST 2xx (Functional Foods): use faculty strength in this area of scholarship to offer a course of high interest to students, *team taught with faculty from FST, VEN and possibly other departments.*

B. RESEARCH

- **List *highest* priority (a) disciplinary and (b) interdisciplinary research areas in your department and indicate the need for corresponding future FTE hires for both (a) disciplinary and (b) interdisciplinary areas.**

(a) Disciplinary

A strong Food Science program requires the participation of the following *key disciplines:*
Food Chemistry and Biochemistry
Food Microbiology
Food Engineering
Sensory and Consumer Science

(b) Interdisciplinary

Improved Food Materials/Advanced Methods: The strong cluster of engineering and physical chemistry faculty within the group has led to special emphasis on *creating novel food materials,* and *on using advanced tools* such as microarrays, nuclear magnetic resonance imaging, electron microscopy, x-ray scattering, advanced rheological techniques, microfluidics, and metabolomics *to study/manipulate food properties in a sophisticated manner.*

Food Safety: With the continuing globalization of agriculture and food production, there is an *enormous need for research that can enhance food safety*. Continuing food safety research within the college requires the interaction of scholars with an appreciation of agriculture production, food production, processing and distribution that have expertise in disciplinary areas including microbiology, toxicology, ecology, plant and animal physiology, consumer behavior, economics, engineering, agricultural systems and medical sciences.

Sensory and Consumer Science: Our graduate group is distinguished within the U.S. for the number and quality of faculty as well as a *preeminent history in the development of sensory sciences*. It involves the sciences of psychology, neurophysiology, and analytic chemistry.

Foods for Health: Faculty in the FSGG have had major impact on the i*dentification and study of health-promoting compounds*, including antioxidants such as phenolic compounds, specific lipid molecules, phytochemicals and probiotics.

Brewing and Beverages: *Brewing science at UC Davis is virtually without peer* within the United States and in the top few programs in the world. This program is important in attracting students, research support and gifts related to beverage science, such as the $5 million Busch gift to the RMI, and an endowed chair in FST.

Future FTE Hires:

Food Safety— *Identification and elimination of sources of pathogens* and toxic chemicals in the environment and food processing/delivery systems. New rapid diagnostics.

Food Chemistry—*A physical chemist or a carbohydrate or protein chemist* is needed to contribute to improving food materials, food safety, food preservation, and/or foods for health. An organic chemist with expertise in chemical changes in foods would also support those areas.

Dairy Foods Specialist—*A dairy foods technologist to work on such areas as new product innovation,* new processing technologies, and byproduct utilization, in cooperation with the dairy industry in California.

- **Have you considered that FTE might be hired in more than one department?**

  The department will explore future joint hires in such areas as food safety and food chemistry. FST has recently cooperated on new hires (Nitin, BAE; Slupsky, Nutrition; Ristenpart, CHMS) under the Foods for Health Initiative. FST has an existing strong joint FTE collaboration with BAE predating the Nitin appointment involving four faculty members (M.McCarthy, K. McCarthy, Singh, Krochta) and with American Studies (Biltekoff) and Chemical Engineering and Material Sciences (Powell, Dungan).

  The department has one Adjunct faculty (no salary) and is developing a second application. *Adjunct faculty with more than one department collaborating represents another opportunity* to strengthen existing programs and develop new ones

- **Are there consolidations your department could consider which would strengthen two or more departments' weaknesses due to attrition to be able to retain a scholarship strength within our College? Please identify possible departments.**

  Are there areas of consolidations: *Analytical chemistry of foods and vegetables has been under discussion between FST, VEN, and ETX*, all of which have expertise in refined methods of chromatography, mass and nuclear magnetic resonance spectrometry for analyzing food and beverage composition, including trace level constituents. A shared instrument laboratory, in part with extramural funds, has been planned to strengthen the instrumental base for a collaborative effort. Bio-based products made from agricultural processing wastes or other natural sources, represent another area for potential interaction.

  Shared faculty with Textiles and Clothing in the area of biopolymers (fibers, proteins, carbohydrates) is being discussed. Dietary fibers represent an area for potential interaction and cross-fertilization.

- **Suggest future new research centers (organized by existing faculty) that would enable interdisciplinary research across departments of the College, despite reduced departmental FTE or any departmental reorganization, and would allow "identities" to remain even if departments change.**

Beverage Science - Formation of a new Center, joint with VEN, other departments such as Nutrition, has been discussed. UCD is uniquely positioned to form a collaboration in this area, *involving fruit and vegetable based beverages, wine, beer, dairy, tea, coffee, and health beverages*. The goal is to leverage faculty resources to be better recognized and more competitive in an important area. The concept has support from industry.

Sensory and Consumer Sciences - Formation of a new Center, joint with VEN and Nutrition, possibly other departments/programs such as Psychology and M.I.N.D., might *probe the fascinating areas of recognition and reaction to flavors, aromas and other key elements involved in food preferences and healthy food choices*. This builds on the unique strengths in sensory and consumer science in FST and VEN.

Consolidation of existing Centers dealing with some aspect of foods, composition, nutrition, and health, should be explored at the College level, including identifying mechanisms that minimize costs while maximizing 'branding' important to each program's recognition outside the College.

Although not Centers per se, *Graduate Groups should serve as focuses for specific areas such as foods for health, through training grants, other mechanisms*. FST is submitting a National Needs training grant application, and FST faculty participate in another funded National Needs program through Nutrition. Graduate Groups represent a resource that is often underutilized in program planning at the College level.

C. OUTREACH

Given the wave of Cooperative Extension (CE) retirements expected very soon and that in the future the College will have fewer CE resources:

List the highest priority areas of extension and outreach for retention that (a) meet state needs for stakeholders (b) will sustain/foster the CE/Farm Advisor continuum and (c) align with departmental priorities.

Our current CE specialists are: Diane Barrett (Fruit and Vegetable Products Specialist), Christine Bruhn (Consumer Science Specialist), Linda Harris (Microbial Food Safety Specialist – Produce focus), Moshe Rosenberg (Dairy Science Specialist), Carl Winter (Toxicology/Risk Assessment Specialist). Pamela Tom (Academic Coordinator) also heads up the Seafood Network Information Center funded by the Sea Grant program.

Our priorities for future CE hires given recent and pending retirements are:

- Dairy Processing/Safety
- Consumer Science
- Vegetable Processing/Safety
- Seafood/Animal Protein Processing/Safety

Have you considered opportunities to realize departmental highest priority areas by organizing outreach centers such as RIC's (Research Information Center, http://rics.ucdavis.edu/), or via ANR REC's (Research Extension Center, http://danrrec.ucdavis.edu/), or by other suggested means?

The extension specialists in the Department of Food Science and Technology have a long history of working with outreach centers. Specialists (and Academic Coordinator) are actively involved (often in leadership roles) in the *Postharvest Research and Information Center (PRIC),* the *Center for Aseptic Processing and Packaging (CAPPS),* the *Seafood Network Information Center*, the *Western Center for Food Safety and Security (WIFSS)*, the Western Center for Food Safety and the *Center for Produce Safety (CPS).* We also interact with the *Robert Mondavi Institute (RMI)* and the *California Institute for Food and Agricultural Research (CIFAR)*. These centers are already recognized by ANR and most have active research AND outreach functions. We do not see that organizing more centers is necessary but instead would encourage the department and college to evaluate how existing centers could better coordinate activities both internally (UCD/ANR) and externally *to avoid duplication of effort, to lesson confusion with the public, and to maximize "branding"*.

D. STRATEGIES GOING FORWARD

Please list other strategies being considered by your department to deal with attrition and potential FTE reductions:

Is the department consulting directly with other departments within the College or seeking collaborations between departments?

Do you have ideas for a new organizational model involving your department? Please provide other relevant comments.

FST will work with other departments, including VEN, BAE, NUT, TXC, ETX and others on future interactions involving research projects, training grants, funding, special facilities, new centers, joint appointments and other mechanisms for enhancing research.

A *multi-departmental or SMA cluster*, organized in such a way to include research and teaching, but maintaining existing strong departmental visibility and focus, would be useful.

FST works closely with several vigorous centers/institutes that can enhance programs in food science, including the *Robert Mondavi Institute for Wine and Food Sciences*, the *California Institute for Food and Agricultural Research*, the *Foods for Health Institute*, the *Postharvest Technology Research and Information Center*, and the *Western Institute for Food Safety and Security.*

FST will also continue to pursue opportunities for *collaborations with industry* (the Departmental Leadership Board was recently expanded with new corporate representatives), including through opportunities afforded by the new pilot plant facilities at RMI.

FST will continue to explore new *cooperations internationally*, expanding on existing strong connections in Asia, and initiating new cooperations in South America and the Asian sub-continent. Food Science and Technology continues to be of major interest in these areas, and FST faculty have a strong presence in these international circles upon which to build.

Human and Community Development

TO: Mary Delany (medelany@ucdavis.edu) and Jan Hopmans (jwhopmans@ucdavis.edu).

FROM: Human and Community Department

RE: Departmental Information Request - January 5, 2010, College Academic Planning Committee

DATE: January 21, 2010

In what follows, we address the College Academic Planning Committee's questions regarding our two unit-Department's highest priority in teaching, research, and outreach programs that our faculty has collectively identified to be retained as crucial components of the College.

A. Teaching:

- **Community Development Unit**

The CD unit has significantly transformed its two undergraduate majors in order to adapt to the structural changes our unit and the college have been facing during the last couple of years. First, we have revised and streamlined the Community and Regional Development (CRD) major's curriculum. This change has resulted in a substantial reduction in the number of courses taught by Unit 18 lecturers. We eliminated and/or reclassified several courses, restructured the methods requirement (which are now mostly 'outsourced' to other majors), consolidated the areas of specialization (tracks) from five to three, and created an Honors Program – the first to be created in the college. All of these changes have recently been approved by both the Undergraduate Majors and Courses Committee (UMAC) and the college Executive Committee (EC) and have resulted in a substantial 35% increase in the number of CRD majors (from 145 students at the end of academic year 2007-08 to 196 at the end of Fall quarter 2009).

Second, facing the retirement of our colleague Steve Brush, who led the International Agricultural Development (IAD) major for nearly three decades, and in order to preserve this major's international orientation, we restructured the IAD curriculum and renamed it as International Development Studies (IDE). The IDE major shifts its emphasis away from interdisciplinary training in biophysical and social sciences to interdisciplinary training solely in the social sciences. It focuses on three areas: economic development, community development, and trade and development. This change has also been

approved by both UMAC and EC. We expect that the new IDE major will attract a larger number of students than IAD was ever able to attract.

However, CD is facing a critical demographic crisis that seriously threatens the viability of its undergraduate teaching program. Over the past couple of years, we have seen the retirement of three Senate faculty FTEs – Janete Momsen (Fall 07), Miriam Wells (Spring 09), and Steve Brush (Fall 09), while a fourth senior faculty, Michael Peter Smith, has recently announced his decision to retire at the end of Fall quarter, 2010. From having 8.6 FTE in fall 2008, we currently have 6.6 active FTE faculty fully engaged in our teaching program, a 23% reduction in our FTE base. This reduction has put our teaching program at risk. If not replaced soon, this drastic reduction in our FTEs will threaten the viability of our undergraduate teaching program, for we wouldn't be able to offer all our core upper division courses.

Given this situation, our highest priority for our undergraduate teaching program is to recruit *at least* two faculty members who could teach courses, respectively, on regional development and social equity; politics, governance and urban and regional development; labor processes, technology, and regional change; and international comparative development. These two positions also match the CD unit's research needs, which are discussed below.

- **Human Development Unit**

Our faculty/student (or faculty/student credit hours) ratio in HD is among the highest in the college/campus;

We must assure replacements for the 4 anticipated retirements within the next 5 years; these faculty teach nearly 40% of our current HD courses; When Rose Kraft (Lecturer SOE) retires it will have an enormous impact on our teaching plans; we would lose the equivalent of 2 senate faculty members in teaching responsibilities;

Our current target FTE is 11 (12 including the Dorn Endowed Chair in Infancy position under recruitment). We need to ensure a minimum of 10 senate FTE.

HCD is currently undertaking a structural revision of our department promoting the development of teaching and research synergies between our two units and exploring the possibility of integrating a third unit, Landscape Architecture, to conform a new three-unit department.

As part of the HD-CD integration, and the potential inclusion of LDA, we are studying the possibility of cross-listing method courses, as well as some general social science theory courses across majors. However, the specific areas of specialization of the department's three majors (i.e., mostly based in socioeconomic and political processes in CD and mostly based on psycho-social and cognitive processes in HD) prevent us from possible consolidation and or teaching collaboration that include core courses.

A key dimension of CD's teaching program is the promotion of undergraduate research. We are taking steps for the further promotion of undergraduate research for the HD-CD majors through the creation of a new Sustainability, Development, and Globalization Undergraduate Cluster. This cluster will include not only HD-CD majors, but also the new Sustainable Agriculture and Food Systems major (SAFS) currently being created under the leadership CD Professor Tom Tomich, Director of the Agricultural Sustainability Institute (ASI) – eventually, if the integration with LDA materializes, the LDA major would also form part of this cluster. The cluster takes full advantage of our currently centralized Academic Advising and Internship Coordination units in our department.

B. Research

- **Community Development Unit**

(a) The CD unit is interdisciplinary by definition. In that sense, we have no particular priorities regarding disciplinary perspectives on the sociopolitical, economic, and cultural processes on which our unit's research is focused. Thus, our highest priorities center on topics central for maintaining scholarly excellence. The CD mission centers on investigating and teaching socioeconomic and political processes affecting diverse communities and regions. We seek to find appropriate solutions to specific problems, particularly those affecting people who do not fit the normative schemes of mainstream social science.
(b) The highest priority for CD's research and teaching are two: *Urban and Regional Development* and *Social Equity and Regional Development*. These two areas of specialization are fundamental for accomplishing our overarching mission. They have been covered, respectively, by Distinguished Professor Michael Peter Smith and Professor Emerita Miriam Wells. With their retirement we are losing this expertise. No program focusing on community and regional development will be able to successfully address issues related to community and regional change without covering these two areas. It is thus of the upmost importance for the CD unit in order to maintain its excellence and viability to hire two new FTE positions to cover these areas. This will allow us to continue

building on the CD unit's current strengths as a multidisciplinary unit concerned with community and place as central analytical concepts and core of our mission.

- **Human Development Unit**

  The current highest priority in research and teaching area is methodology with substantive areas of expertise/interests in social emotional development;

  We anticipate two retirements in the area of social-emotional development in middle childhood – adolescence and two retirements in early childhood development within the next five years;

  We must assure replacements for these retirements in order to maintain/strengthen excellence in these areas.

  Our department proposes to continue building and strengthening our expertise on regional change. In that sense we would like to see the Center for Regional Change (CRC) being strengthened, perhaps with the appointment of a new CE Specialist in order to reinforce its outreach dimension and consolidate its research connection with the CD unit and other units across the college and campus.

  We would like to propose a center of Healthy Family and Communities that would enable and facilitate interdisciplinary collaborations across departments/units such as Community Development, Human Development, Landscape Architecture, Nutrition, and Environmental Toxicology. This direction is consistent with the ANR Strategic Vision.

C. Outreach:

- **Community Development Unit**

The research and outreach program of the current CE Specialist at the CD unit fits perfectly well with the unit's mission. His program, focusing on community and regional governance, also articulates very closely with the CRC's mission. In fact, he is co-PI in a multimillion dollar project that includes faculty from HD, LDA, and CRC. As stated earlier, the synergies between the CD unit and the CRC could be

strengthened by the appointment of a new CD Specialists focusing on youth development and community sustainability.

- **Human Development Unit**

  The highest priority areas for HCD are healthy families and communities, which are aligned with the ANR newly established Healthy Families & Communities Initiative.

  For HD, youth development (4-H) and family well-being are the central themes. These areas are the highest priorities that are aligned with ANR Strategic Vision, are consistent with the USDA and our college mission, and meet state needs for stakeholders.

  The center proposed in the research section would also serve as an extension center.

D. Strategies:

The HCD department has spearheaded a full restructuring effort since last August. The department has been functioning for the last decades as two independent academic units (HD and CD) integrated only in their administration. The two units have in fact worked as an administrative cluster, sharing personnel for its daily operations not only in the business part of things, but also in undergraduate and graduate academic advising and internship coordination. Since last August, the faculties from both units have been working with LDA in exploring the possibility of forming a three-unit department.

Department of Land, Air and Water Resources Response to:
College Planning Committee Survey
January 25, 2010

A. Teaching:

- Please indicate teaching issues of concern, such as core course teaching coverage and teaching workload issues that are going to arise from FTE attrition in the coming years.

➢ Since 1995, LAWR has lost a net of 7 senate faculty resulting in several significant changes to our teaching programs. Over the past five years, LAWR has consolidated several courses within their majors and developed 9 large enrollment courses (e.g., SAS courses). Thus, our course offerings have been streamlined and refreshed, and reflect current content students are seeking. One of our most immediate concerns is being able to maintain the accreditation status of the Atmospheric Science major given the anticipated retirement of two senior faculty that teach core courses.

➢ Given our laboratory intensive courses and several large enrollment courses, adequate TA support is critical to maintaining our high quality teaching program. Many of our core courses with laboratory sections have increased in size in the past 5 years without any additional TA support.

➢ We are actively exploring creative ways to continue teaching all or most of our courses that are critical to address the impacts of climate change, water scarcity and soil resource depletion on agriculture and environmental services:

- Consolidating chemistry labs from two courses into a common laboratory section
- Distance learning: We already teach one course (ATM 280A/B) that includes UC Merced students & another is being developed collaboratively with a CSU campus. We have proposals in for the UC/CSU initiative and Kearney Foundation of Soil Science to develop additional long distance offerings.
- Distance learning has been applied by CE on occasion and is likely to increase in CE activities
- Integrating similar, program-specific classes into one larger, more interdisciplinary class (e.g., a fluid mechanics course that would integrate hydrology and atmospheric science).
- Consider hiring late-career, adjunct professor WOS or WS to assist with teaching
- Potential for CE specialists to obtain I&R appointments to formalize their teaching effort
- Graduate experience in international resource management: We offer a participatory graduate seminar in tropical soils management coupled to internships in community-driven development projects overseas (e.g., 3 yr Engineers without Borders project in Uganda)

- Identify your highest priorities for undergraduate education and recent changes in undergraduate curriculum:

➢ We are currently planning changes to the atmospheric science major to try to attract more students and modify our course offerings to require fewer FTE. While our current ATM major is National Weather Service accredited, we are discussing having this be one of several tracks, with the others not accredited. The only other ATM program at any UC is at UCLA: it has many fewer majors than at UCD and fewer still that follow an NWS-accredited program.

➢ LAWR recently consolidated the Environmental and Resource Sciences & Soil and Water Science majors into the jointly administered (with ES&P) Environmental Science and Management major. Some additional courses may need to be developed to provide comprehensive coverage of some tracks in this new major. Recruiting efforts are also required to expose potential students to the new major.

➢ Many LAWR faculty have worked diligently to create the Sustainable Agricultural Food Systems major to provide a multidepartment undergraduate curriculum.

- List other College (or campus) departments that could *possibly* assist in the teaching of core or service courses, and delivery of majors, departmental or inter-departmental.

➢ Consider partnering with Engineering for a campus wide "Water Science and Engineering" or similarly titled graduate program (with tracks).

➢ Our critical priority is to meet the labor needs for atmospheric scientists, hydrologists, soil scientists and environmental specialists whose projected employment by the US Bureau of Labor will increase by 15, 18, 15 and 28%, respectively in the next decade.

➢ Distance learning

- Webinars
- Web–based with video links to other UC or CSU campuses

- In addition faculty reductions will likely result in reduced faculty availability for graduate teaching. Please list the graduate programs likely to be affected by attrition in your department.
  - LAWR hosts three graduate groups: Atmospheric Sciences, Hydrologic Sciences, and Soils and Biogeochemistry. These graduate programs are unique among other UC campus and we strive to maintain our excellence in these disciplines. In addition, LAWR faculty are members of many other graduate programs, including Ecology, Applied Mathematics, Agricultural & Environmental Chemistry, Plant Biology, Geology, Civil and Environmental Engineering, etc.
  - It is likely that within five years that LAWR will lose approximately one-third of its senate and CE personnel. We will need to employ an adaptive strategy to maintain our strengths in these disciplines. Additionally, with the expertise of our recent hires, an interdisciplinary graduate program along the lines of Environmental Systems Sciences will emerge, especially if we can secure a few new hires in the next five years to facilitate this integration of core strengths within LAWR.
  - To realistically achieve the campus and College goals and priorities in water, environmental quality and climate change, it will be necessary to continue to invest at some level in LAWR graduate programs. Without such investment, the casualties will include the internationally recognized Hydrologic Sciences Graduate Group and its contributions to solution of CA and world water problems, the capability to grow funding in the climate change area, and the high ranking of the soils program, among others. Importantly, the future of all programs on the campus will depend increasingly on greater outside funding, and the areas of water, environmental quality and climate change have the greatest potential for generating substantially more extramural funding in the environmental sciences.

B. Research:

- List *highest* priority (a) disciplinary, (b) interdisciplinary research areas in your department and indicate the need for corresponding future FTE hires
  - The highest priority positions in LAWR are integrative positions that provide a systems-level approach to complement our strengths in process-level research. The current and emerging agricultural and environmental issues require this integrative approach. We see three new positions (listed below) as interdisciplinary, helping integrate faculty within the department as well as linking to other departments.
    - Climate Science Processes – working at a regional to global scale. This position would, in part, be a replacement for two LAWR faculty members, both working on climate processes, who are retiring in the next two years (approximately). We have briefly discussed a joint FTE with LBL for a climate modeler.
    - Remote Sensing (campus-wide, the only UCD remote sensing faculty member is Ustin, but this expertise is important for many departments; Ustin will likely retire within 5 years). Remote sensing capabilities are required to detect environmental change, such as in the area of snow hydrology, land use/land cover change, change in albedo, etc.
    - Basin-scale hydrologic modeler – to integrate atmospheric, hydrologic, and soil processes, with a focus on water quantity and quality.
  - Suggest future new research centers (organized by existing faculty) that would enable interdisciplinary research across departments of the College.
    - Climate Change Center; possibly administered by JMIE to serve as collective hub engaging many departments. This center would focus on strengths and synergies that are specific to UC Davis while also having significant relevance to the core missions of the College. For example, integrating work on the regional specifics of climate change with those studying impacts of climate on native plants and animals. For another example, integrating the specifics of climate change with adaptive strategies for California agriculture and water use.
    - This center could further create momentum towards a future merger of departments where synergies are identified.

C. Outreach:

- List the highest priority areas of extension and outreach for retention that (a) meet state needs for stakeholders (b) will sustain/foster the CE/Farm Advisor continuum and (c) align with departmental priorities.

- Over the next ten years, LAWR expects to lose 7 of our 9 CE specialists to retirement.
- Irrigation Specialist; LAWR expects 3-4 Hydrology CE Specialists (statewide irrigation specialists) to retire in the next two years. This will have a significant negative effect on the irrigation outreach program, which has long been a strength of our program and remains a critical issue for the state in both agricultural, urban and natural landscapes. The applied research and outreach efforts in State agencies, other departments and other campuses look to LAWR for irrigation expertise.
    - To assist with expected reductions, the campus should consider split appointments (senate and CE) to integrate teaching with extension. LAWR currently has one such appointment.
- Recycling of wastes and wastewaters to land. Background in applied soil & water science. This is a growing problem facing State water agencies and is a developing area where LAWR currently has some expertise and needs investment to serve statewide needs.
- Reclamation and repair of disturbed or damaged soils (joint between Plant Sciences & LAWR). Urbanization and public infrastructure has severely affected ecosystem services by degrading soils and disrupting hydrologic flow paths. State water and transportation agencies have traditionally seen LAWR as the source of information to resolve these issues.
- Air quality specialist; this position would fill a critical need in California beyond what is currently done with animal confinement and would complement campus strengths in atmospheric chemistry and crop response to air pollution. The ATM program is unique in the UC system and it has traditionally addressed weather and biometeorology themes but needs continued investment to address air quality concerns.

D. Strategies:

- LAWR has been focused on three individual programs – atmospheric science, hydrologic science, and soils and biogeochemistry. These disciplinary majors 1) meet accreditation requirements, 2) support our graduate parallel graduate programs, and 3) position students favorably for careers important to California. Our main strategy to deal with shrinking numbers of FTE is to explore integration of courses where there is sufficient overlap without harming the disciplinary majors. Another strategy within these majors has been some shifting of emphasis to meet future societal needs. In the past few years, we have developed another, more integrated major that was merged with ESP to become several tracks in the ESM major. This strategy was intended to grow the student numbers served by our department.
- We believe that our departmental expertise on biological, physical, and chemical processes in the environment and agriculture is an important strength on campus that should be preserved, even if we are to shrink. A leading model for our department is to move towards “Earth Systems Science”, which would require we add some expertise in interdisciplinary, systems-level environmental processes as we lose some of our disciplinary faculty.
- We have had some brief, preliminary discussions of a joint program in water sciences with Engineering
- In the area of environmental chemistry, there are some possibilities for sharing teaching with Environmental Toxicology.
- Consider short-term academic appointments rather than career FTE appointments, to include
    - Increasing adjunct professor appointment to assist with teaching – this could be something that is competitive and marketed as a benefit to the individual and providing them with a link to the campus. Advertise the prestigious aspect of an adjunct professor appointment with UCD/LAWR.
    - Increasing Researcher and Visiting Researcher appointments
- Securing partial I&R appointments for CE to meet teaching needs and integrate extension with campus based programs.
- Exploring options for a new center for climate change in agriculture and natural resources to foster interdisciplinary research and enhance interdepartmental relationships for possible future mergers among groups.
- Allow older faculty close to retirement to work half time (save salary) while accumulating service credit to fill vital gaps in programs.

LDA RESPONSE TO COLLEGE PLANNING COMMITTEE
DEPARTMENTAL QUESTIONAIRE
JANUARY 21, 2010

A. Teaching:

- Please indicate teaching issues of concern, such as core course teaching coverage and teaching workload issues that are going to arise from FTE attrition in the coming years.

Our main concern is to cover the core landscape architecture courses that are necessary for our accredited professional degree program. Those courses include subjects such as landscape design studios, design detailing, construction documents, grading and drainage, and some of the hand- and computer-drafting classes. These technical classes typically cannot be taught by faculty from other departments, but to some extent can be covered by Unit 18 lecturers if some FTEs for our retiring faculty are not replaced. We must retain at least three FTEs with professional landscape architecture degrees to be certain of retaining accreditation, however. We also have some concern that retirement of GIS faculty in other departments may impact our program, especially if we end up offering the only GIS courses on campus.

- Identify your highest priorities for undergraduate education (e.g., majors, minors, service courses, participation in or development of inter-departmental majors).

For several years we have been developing plans for a new major in Sustainable Planning and Design. At the same time, we hope to migrate our BSLA degree to the graduate level as an MLA. These changes would: 1) allow us to serve a larger number of undergraduates than our current, heavily impacted degree, and 2) allow us to continue to offer the intensive professional degree at a graduate level.

- Identify any recent (last few years) or proposed changes in your undergraduate curriculum as a result of priority setting.

We have made incremental changes to our program in response to internal and external critiques (ASLA accreditation review, College program review), the addition of recent new hires and our collective vision for the future. We are currently shifting course goals and content within the existing course structures. Future changes are linked to our Academic Plan and our proposed new undergraduate and graduate degrees. We expect few new courses being required, but some revamping will be required to address the larger class size of a non-professional undergraduate major and to boost existing courses to the graduate level.

- List other College (or campus) departments that could *possibly* assist in the teaching of core or service courses, and delivery of majors, departmental or inter-departmental.

Community Development, Environmental Science and Policy, Design, and Civil Engineering could potentially assist in teaching courses for our proposed new undergraduate major. Environmental Horticulture has traditionally taught two courses that many of our students have taken (one is required). We list the courses of many additional departments as restricted electives and breadth requirements. We will continue to make use of available courses in other units when appropriate.

- In addition faculty reductions will likely result in reduced faculty availability for graduate teaching. Please list the graduate programs likely to be affected by attrition in your department.

Our program is home to the Geography Graduate Group, and we typically offer 4-6 graduate courses per year that are taken by students in Geography, Community Development, and (to a lesser extent) Transportation graduate programs. Some graduate students in Ecology, Anthropology, Cultural Studies, and other programs also work with our faculty.

We have committed to a minimum number of graduate courses, and loss of faculty will put additional pressure on our ability to offer a full six courses. However, we intend to sustain offering a minimum of three courses per year.

B. Research:

- List *highest* priority (a) disciplinary, (b) interdisciplinary research areas in your department and indicate the need for corresponding future FTE hires for both (a) disciplinary and (b) interdisciplinary areas….Have you considered FTE that might be hired in more than one department? Are there consolidations your department could consider which would strength two or more department's weaknesses due to attrition to be able to retain a scholarship strength within our College? Please identify possible departments.

Highest priority research areas include sustainable design of built landscapes (including considerations of climate change mitigation and adaptation); cultural diversity and citizen participation in design; urban agriculture; water policy and management; natural resource management and conservation; and history and theory of the built environment.

We have recently been approached by a faculty member in another department who is interested in joining our program. If possible, this would strengthen us in the areas of theory and history of design. A merger with Human and Community Development could strengthen us in community participation, environmental psychology, and social issues. An affiliation with ESP, LAWR or another environmental science program would strengthen our work with the natural environment.

- Suggest future new research centers (organized by existing faculty) that would enable interdisciplinary research across departments of the College, despite reduced departmental FTE or any departmental reorganization, and would allow "identities" to remain even if departments change.

One of our faculty members manages an established applied research and outreach center called the Center for Water and Land Use, which he is in the process of broadening and expanding into the Center for Sustainable Design. This could become a vehicle for faculty research, as well as a focal point for interdisciplinary work with ESP, CD, Environmental Engineering, GGG faculty, and others. We also work extensively with the Center for Regional Change and the Center for Urban Horticulture. Centers focusing on community engagement in culturally diverse communities and commercial applications of sustainable design would be additional possibilities.

C. Outreach:

- List the highest priority areas of extension and outreach for retention that (a) meet state needs for stakeholders (b) will sustain/foster the CE/Farm Advisor continuum and (c) align with departmental priorities.

Our highest priority areas are sustainable landscape design, community involvement, urban food systems, and educational environments. We presently share a single CE FTE and have found that the individual's outreach, research and teaching are very valuable and are considered an integral part of our connection with the state. We hope that the College will consider innovative ways to assist departments like ours in getting information out to the public-at-large, including papers and reports prepared by faculty. Impact sheets, CE outreach, and the work of various centers currently helps do this, but given CE cutbacks and the need for additional development efforts, such outreach should be a priority. We also see additional opportunities to use media channels and webcasts as outreach vehicles and would like to see the College take the lead in organizing and coordinating these efforts.

- Have you considered opportunities to realize departmental highest priority areas by organizing outreach centers such as RIC's (Research Information Center, http://rics.ucdavis.edu/), or via ANR REC's (Research Extension Center, http://danrrec.ucdavis.edu/), or by other suggested means?

We have not, although some centers within our department in the past such as the Center for Design Research and Community Design and Planning Services appear to have functioned as RECs. We would welcome the opportunity to include efforts similar to these into existing research and outreach centers.

D. Strategies:

- Is the department consulting directly with other departments within the College or seeking collaborations between departments?

We are in active negotiations with Human and Community Development around a possible merger.

We are also meeting with program and department chairs in the environmental sciences to explore potential affiliations. At the core of our profession is the embrace of both the socio-cultural and the natural parts of the landscape. Landscape Architecture is a discipline that considers both in every decision. No existing departmental affiliation will fulfill both of our sides and we hope that the visioning process underway may offer some additional options for program mergers, or support of creative shared faculty arrangements.

- Do you have ideas for a new organizational model involving your department?

Not presently. The chair is meeting to continue discussions concerning new organizational models this month.

- Please provide other relevant comments.

Some faculty are concerned about a perceived divide between environmental and social scientists within the College. We believe that such a divide is detrimental to the mission of the College, and emphasize that the College needs to facilitate integrative work across such barriers.

College Planning Committee – Departmental Information Request

Department of Nutrition

A. Teaching:

- **Priorities for undergraduate education:**
  - **Majors: Teaching of core courses for all nutrition majors and specialized courses for each track or major, including continuation of accredited program**
    - **Nutritional Science (Biochemistry track; Community Nutrition track)**
    - **Clinical Nutrition (*note that this is an accredited program [by the Commission on Accreditation for Dietetic Education] and therefore must maintain a curriculum that includes specific specialized courses)**
  - **Service courses with large enrollment: Nutrition 10 & 11 (serves general campus population with ~600 students every quarter), 111AV (serves majors and other science majors within CAES & CBS with ~400 students yearly)**
  - **Minors: Nutrition science, community nutrition, food service management**
  - **Interdepartmental majors: Not currently participating in any; would consider this to supplement current programs, but not substitute for existing majors.**
- **Proposed changes in undergraduate curriculum: Currently in advanced planning stages to revise the Community Nutrition track as a departmental priority to best meet the needs of student clientele for career preparation and for post-graduate education options. This involves two new courses being developed within the department, and modifying requirements for breadth courses outside of the department.**
- **Teaching capabilities within the department will be reduced with a smaller department as a result of attrition through anticipated retirements over the next five years. Some of the faculty teaching expertise which will be lost can be met by the recent hires of new faculty in the department (analytical and basic science approaches and international nutrition). However, what will be at risk is expertise in the applied human nutrition translational approaches in public health and clinical nutrition, and nutrition policy development.**
- **Other campus departments that could *possibly* assist in teaching: Select faculty from Environmental Toxicology and the department of Food Science and Technology could contribute to specialized courses covering topics such as analytical laboratory techniques, developmental nutrition and toxicology, or phytochemical chemistry and metabolism. It should be noted that we already utilize some core courses offered by other departments and majors (such as Animal Biology, Food Science and Technology) and that Animal Science faculty teach some nutrition courses. Of particular note is that we do have 4 faculty with joint appointments (3 jointly with Environmental Toxicology, and 1 with Food Science and Technology), who contribute to teaching in both of their home departments through single**

and cross-listed courses. The expertise in other departments is complementary to that in nutrition, but does not substitute for that within our discipline. We feel that teaching by other departments will not be able to replace teaching of core disciplinary and depth coursework within the nutrition majors.

- **The graduate program most impacted by the faculty attrition is the Graduate Group in Nutritional Biology. This is an interdisciplinary group involving faculty primarily in the nutrition department, with broad participation from within the college (ANS, FST, ARE, etc) and outside of the college (school of Medicine, school of Veterinary Medicine, school of Nursing, etc.)**

B. Research:

The field of nutrition is by nature very interdisciplinary, incorporating aspects of biological and social sciences to address questions concerning human and animal biology, metabolism of essential and non-essential food components and toxicants, health and disease, social and economic welfare concerning foods, food availability and choices, and associated policy implications. We study the biological outcomes of diet, environmental and genetic interactions in a wide variety of species. As such, our faculty is very diverse and carries out a wide variety of research activities to meet the missions of the college and university. Our discipline is central and integral to the Land Grant University and UC Davis' agricultural roots.

- **The nutrition department faculty has identified our core (inter) disciplinary research areas and approaches. These represent our strengths and our long-term vision for the future of the field, and apply to both research and outreach activities. The combination of specialized focus in *both* mechanisms and translation is a distinguishing characteristic of our department that sets us apart from and above other nutrition departments in the United States as well as in other countries. Indeed nutrition departments in other universities are often combined with other disciplines, leading to a dilution of focus and inability to build substantial strength in nutritional science.**
    - **The overarching theme is: Nutritional Biology and Translation to Human Health**
        - **Science technologies and cutting edge approaches expected to contribute to the future growth in the discipline that are used in support of these aims in nutritional biology at UC Davis include: molecular and cell biology techniques, nutritional genomics, epigenetics, proteomics, metabolomics, pharmacokinetics and modeling, evidence-based medicine, advanced epidemiological study designs, and innovative nutrition education methods**
    - **Mechanistic:**
        - **Developmental nutrition, with emphasis on the acute and persistent effects of diet during prenatal and early postnatal development, and childhood, and how these effects increase the risk of adult chronic disease.**

        - **Clinical human research and animal models of nutrition-related diseases, with an emphasis on obesity and age-related chronic diseases including diabetes, cancer, osteoporosis, and cardiovascular disease.**
        - **Metabolism and nutritional toxicity (both at the molecular and cellular levels) with an emphasis on essential minerals, vitamins and phytochemicals from natural foods and products.**
    - **Translational:**
        - **International and community nutrition with an emphasis on maternal and child health and development in disadvantaged populations in the U. S. and emerging nations.**
        - **Clinical human research evaluating the impact of food-based interventions on markers of health and chronic disease risk.**
        - **Nutrition education in schools, communities, and in support of USDA's food assistance and education programs.**
- **Anticipated departmental attrition through retirements will impact both the mechanistic and the translational areas of focus within our department research programs. We would welcome future recruitment in both of these areas, either at the assistant professor level or mid-level faculty whose accomplishments could energize a specific need within the department and provide for continued prominence. While single department appointments are more straightforward, we are open to the possibility of joint FTE appointments, as we already have 4 faculty with joint appointments in FST and ETox. (The exact research content priority would need to be assessed at the time. Additional considerations for prioritizing recruitments would include those factors identified by the CPC and Dean's office, including achieving a balanced age/demographic distribution, and strengthening core research, teaching and outreach).**
- **Faculty within the department of nutrition currently participate in the Foods For Health Institute (FFHI); a center meant to synergize interdisciplinary research across departments. While this research center provides a common nexus of collaboration around the themes of foods and health, it does not necessarily compensate for reduction of departmental FTE in terms of critical areas of teaching and would not substitute for our departmental "identity".**
- **The Program in International and Community Nutrition (PICN) is an organized research unit (ORU) that is interdisciplinary across colleges and schools but resides administratively within the department. This unit is highly productive and successful in obtaining large extramural grants for collaborative research and nutrition interventions that make a significant difference in the health of diverse populations. Its long-term future is in jeopardy because of projected retirements among key faculty members in the department.**
- **Faculty within the nutrition department have been instrumental in establishment of the UC-wide Global Health Institute(GHI) and are members of the steering committee for the One**

Health Center (one of three centers systemwide with pilot funding from the GHI). The departmental core translational research areas fit very well with the priorities of the One Health Center and Global Health Institute as a whole.

- **The USDA Western Human Nutrition Research Center (WHNRC) is a key research collaborator with departmental faculty and serves as an added dimension to the department. Most of the WHNRC scientists are adjunct faculty and participate in a range of departmental and graduate group roles.**
- **Current research collaborations that exist with other departments are facilitated by the Graduate Group in Nutritional Biology. Ongoing collaborations among nutrition faculty with other departments within or outside the college include: FST, ETox, ANS, HDE, ARE, IAD, CBS, School of Education, School of Medicine, School of Veterinary Medicine, and School of Nursing. We are eagerly seeking continuing and new potential research synergies with other departments and faculty.**
- **We are not seeking consolidation with other departments at this time. Much of the concern identified by the CPC (primarily skewed age demographics) was addressed by our recent faculty hires which were not reflected in the final CPC report. It is the opinion of the department that while FTE attrition through retirements will impact the department (which would then benefit from additional FTE as they become available), we will still be able to sustain sufficient stability, research scholarship strength and teaching capacity to support our majors. Our department is one of the top performing departments in the college, one of the top nutrition departments in the nation, and is poised to continue to thrive and excel as the leader in nutritional biology. We will be able to withstand a 10% reduction in FTE. We contend that maintaining our independent structure and departmental identity is in the best interest of the department. We therefore do not desire academic consolidation with another department. We are receptive to exploring possible additional mechanisms beyond departmental consolidation that may facilitate maintaining strength and excellence within the college. We are also receptive to administrative clustering with other partner departments, but feel that departmental academic consolidation would be a potentially divisive process that would threaten the collegial culture of our department. The nutrition department faculty would need to be convinced of a strong and compelling argument and need for the good of both the college and the department in order to consider accepting consolidation. The likelihood of significant benefits in terms of research, teaching, outreach and financial considerations would need to be demonstrated. In consideration of possible departments as candidates for partnering and consolidation, two departments were identified – Food Science and Technology, and Environmental Toxicology. Neither is a particularly good or perfect fit, but ETox is somewhat more logical due to the research focus and approaches. The two disciplines complement nutrition in different ways, but they are not felt to be completely compatible as a combined department with nutrition. The expertise they would bring is unlikely to overcome any critical scholarship weaknesses that**

may occur in research or teaching within the nutrition department. Thus, the nutrition department is not actively considering consolidation with another department.

C. Outreach:

- **Outreach activities of the department, including CE specialists, takes many forms. Our outreach, as well as our teaching and research efforts align strongly with at least four of ANR's 2025 strategic initiatives, including "Enhance the Health of Californians and California's Agricultural Economy", "Healthy Families and Communities", "Ensure Safe and Secure Food Supplies", and "Increase Science Literacy in Natural Resources, Agriculture, and Nutrition". A priority mission area is cooperative extension outreach to the counties regarding nutrition, food safety, health and physical activity across the lifespan. Development, implementation and evaluation of innovative curricula and other approaches for dissemination of nutrition information to optimize health of Californians is a key priority for the CE specialists and department.**
- **The department hosts web pages with nutrition information, which serve in essence as a research information center of the department and affiliated groups.**
    - **Nutrition information outreach materials from the nutrition CE specialists are provided here (newsletters, information sheets, curriculum information, health-related video presentations, and nutrition education competencies for the California Department of Education)**
    - **Centers and Program information and links are provided for many affiliated units, including: Center for Health and Nutrition Research; Foods for Health; International Zinc Nutrition Consultative Group; Center for Nutrition in Schools; International Lipid-based Nutrient Supplements Project and others.**
- **A significant priority for the department in conjunction with ANR is outreach to low-income audiences living in poverty who are at risk of poor nutrition. This is achieved through county-based CE programs, supported by expertise of the CE specialists. Another way this priority is achieved is in support of USDA's food assistance and education programs, such as the Expanded Food and Nutrition Education program (EFNEP).**
- **It is appreciated that in addition to the high-risk populations of low-income individuals and families, other audiences in the state may be at risk of poor nutrition. Efforts to reach this audience are another outreach priority which is being addressed by the department. Innovative means of nutrition education are being pursued, such as online tools for adolescents and telehealth programs like those utilized by the UCDMC and school of medicine.**

D. Strategies:

- **Faculty input into the document was sought through email, personal conversations, and a faculty meeting held January 13, 2010.**

- **The department chair has consulted directly with the following departments concerning strategies for departmental organization and college success in light of the planning process: Food Science and Technology; Environmental Toxicology; Human Development. The department is actively seeking continuing and ongoing collaborations and synergy with all of the departments listed above in the body of this document and is receptive to new opportunities.**

Plant Pathology

Teaching

- **Plant Pathology is the administrative home for the Plant Pathology Graduate Program and all PLP faculty members currently contribute to instruction in this program**
- **Maintaining an appropriate curriculum requires a breadth of expertise that spans major organismal groups and levels of organization**
- **Fungal molecular biology is presently the most conspicuous gap in required faculty expertise for teaching**
- **At the undergraduate level, the Plant Pathology Department has focused on delivering upper division courses that serve as electives for several majors**
    - **PLP 120, PLP 123, PLP 130, PLP 140, PLP 148, MIC 162**
    - **These courses constitute linkages to Plant Sciences (and related majors), Biotechnology, and any major that requires an organismal course**
- **Plant Pathology is the only department that teaches undergraduate courses on fungal biology (a major eukaryotic lineage) and is the primary repository of faculty expertise for teaching in virology**
- **PLP faculty members extensively participate in lower division GE courses**
    - **This is important to our college because even with a reduction in faculty and majors, there will not be enough major courses for the faculty to meet teaching expectations**
    - **A strong GE program is critical to exposing our faculty to the overall campus student population**
    - **GE courses can also serve as gateways to CA&ES majors**
    - **Existing undergraduate majors in CA&ES and CBS constrain our options for development of a major that would be centered in Plant Pathology, and we therefore do not foresee this as a future focal point for our undergraduate teaching activities**

Research

- **Plant pathology encompasses the biology of diverse disease causing agents and their plant hosts, and management of plant diseases**
- **Plant pathology is concerned with phenomena at molecular, cellular, organismal and population levels of organization**
- **Research expertise in fungal molecular biology is presently our greatest need and our top priority for recruitment**
- **We have natural affinities with faculty members in Nematology, as some nematodes are important plant pathogens**
    - **Our faculty sees a union with the Department of Nematology as reasonable and appropriate under the present circumstances**
    - **We anticipate working with the Nematology faculty to develop a shared vision for a future combined department**
- **We have affinities with faculty members in Plant Sciences and Viticulture and Enology**
    - **Some faculty members in these departments have interests and expertise that overlap and/or complement those of our faculty**
    - **This includes but is not limited to faculty concerned with genetic improvement of crops and those with interests in host-microbe interaction**

    - **Closer connections with those faculty members would be reasonable but the present separation by department is not seen as a barrier to collaboration**
    - **Shared FTE in the future might be appropriate but we do not see a compelling argument for this presently**
- **We have affinities also with a subset of the faculty in the Department of Entomology**
    - **This pertains to faculty members with a focus on plant-associated insects**
    - **The role of insects as vectors of plant pathogens is one obvious area of synergy and might constitute a future opportunity for shared FTE**

Outreach

- **CE resources presently devoted to plant disease problems in the state of California are nowhere close to being commensurate with the magnitude of the issues facing agriculture in this state**
- **The most conspicuous present need is to fill a gap created by retirement of the specialist dealing with fruit tree diseases in the central valley**
- **A future full time position devoted to diseases of grape vines – presently covered by a specialist with many other responsibilities – is justified by the importance of this crop and the number of diseases that affect it**

Strategies

- **As noted above, we are exploring the concept of a future department that combines Nematology and Plant Pathology**
- **As the departmental home of expertise in plant-microbe interaction, Plant Pathology might include faculty members presently in other departments but we are not advocating for realignment of existing faculty FTE for this reason**

January 12, 2010

Department of Plant Sciences

College Planning Committee Survey

A: Teaching:

Teaching issues of concern:

- Department of Plant Sciences is losing critical faculty expertise in areas such as crop production, ecosystem management, and ecophysiology that is also not present in other departments.

Related to the point above, much of our remaining expertise resides in CE faculty, many of who do teach now, but are not recognized for it or are actively discouraged from teaching. The Department of Plant Sciences will need to incorporate more CE faculty members into teaching to cover these practical areas of our curriculum, assuming administrative hurdles can be overcome.

We support and encourage individual CE faculty to seek professorial series, academic senate appointments where appropriate. In selected areas, we have targeted new joint CE/I&R/AES appointments. In such cases, there must be a demonstrated need for the targeted expertise in our teaching programs.

Highest priorities for undergraduate education:

- The department of Plant Sciences recently completely revised its curricula and majors (see next item), so the highest priority is to get those new courses and majors underway and develop strong student clientele for them.
- Laboratory courses are critical to the departmental curriculum and to student education, but limits on TA support are making it very difficult for the department to implement these courses in the new curriculum and maintain existing ones.
- The department will continue consolidating our course offerings to primarily core courses that are required for our majors or service courses that have large enrollments. Plant Sciences is cutting small enrollment courses as much as possible.

Recent changes in our undergraduate curriculum:

- The department previously had interdepartmental (and inter-college) majors, and in the past 3 years have revised two majors to create new ones better aligned following the merger of the 4 departments.
- Plant Sciences has created and offered a core course series designed specifically for the new Plant Science major.
- Plant Sciences separated the major and catalog course listings from Plant Biology in the College of Biological Sciences (previously Plant Sciences had a shared major and course listings when CBS was a division).

Other departments that could assist in teaching:

- LAWR (ecophysiology)
- Plant Pathology, Entomology, Nematology (pest management courses)
- ESP (Ecological Management and Restoration major)

Graduate program impacts:

- Horticulture and Agronomy GG and Ecology GG are being impacted most due to loss of faculty expertise cited previously in crop production and ecophysiology areas
- Genetics GG will also be impacted by retirements over next 5-10 years.

B. Research

In concert with outreach (see section C) Plant Sciences has identified 7 core (inter) disciplinary research areas. These core areas represent the long-term vision within the department for both research **and** outreach.

- Cropping Systems
- Ecosystem Management and Restoration
- Genetics, Genomics, Plant Breeding, and Biodiversity
- Plant Physiology: Development, Nutrition and Reproduction
- Postharvest Biology and Technology
- Urban Forestry and Urban Horticulture, and
- Weed Science

There is no specific priority ranking within the department of these core areas, we consider all essential for the department to maintain its regional, state, national, and international leadership position in plant sciences.

The department of Plant Sciences is not a proponent of hiring new FTE in more than one department. The benefit to the department of appointments in more than one department is often hard to assess.

Criteria/considerations for prioritizing I&R/AES recruitment include continuing and further strengthening departmental core research competencies, moving toward a more balanced demographic composition of faculty in all areas, strengthening fundamental and application-oriented research and outreach capabilities, and assuring that present and future teaching responsibilities are met.

Highest priorities for I&R/AES recruitment (not listed in order of priority):

- Food safety- Integrative plant physiology
- Plant Physiologist- Reproductive physiology
- Postharvest biology and physiology
- Robotics and sensors in specialty crop production systems
- Tree-crop production-systems ecology
- Urban horticulture
- Weed ecology and whole plant physiology
- Tree crop breeding and genetics.
- Genetics and breeding of Poaceae for food and biofuels
- Legume genetic resources conservation, genetics and breeding.
- Genetics, genomics and breeding of Asteraceae specialty crops
- Genetics and breeding of Cucurbitaceae vegetable crops.

C. Outreach

In concert with research (see section B) Plant Sciences has identified 7 core (inter) disciplinary outreach areas. These core areas represent the long-term vision within the department for both outreach **and** research.

- Cropping Systems
- Ecosystem Management and Restoration
- Genetics, Genomics, Plant Breeding, and Biodiversity
- Plant Physiology: Development, Nutrition and Reproduction
- Postharvest Biology and Technology
- Urban Forestry and Urban Horticulture, and
- Weed Science

There is no specific priority ranking within the department of these core areas, we consider all essential for the department to maintain its regional, state, national, and international leadership position in plant sciences.

Criteria/considerations for prioritizing CE FTE recruitment include having excellent prospects for research and extension support, having strong connections to AES faculty and programs, having demonstrated needs at the county level, and having ties to commodity/sector needs.

Highest target areas for new CE Specialist recruitment (not listed in order of priority):

- Food Safety (possible joint CE/I&R/AES)
- Grain Specialist
- Orchard Systems Ecology
- Restoration Ecology
- Postharvest biology and physiology (possible joint CE/I&R/AES)
- Urban forestry/urban horticulture
- Vegetable cropping systems /Organic production

Plant Sciences hosts eight Research Information Centers (RICs). The RICs represent long standing collaborations between UC ANR, the UCD College of Agriculture and Environmental Sciences, the Department of Plant Sciences, and the many campus and county academics which comprise UC ANR.

Our CE faculty includes seven members who are located off-campus at ANR Research and Extension Centers and USDA Stations: four at Kearney Agricultural Center (Parlier, Fresno County), two at U.S. Agricultural Research Station (Salinas, Monterey County), and one at West Side Research & Extension Center (Five Points, Fresno County).

D. Strategies

Following the merger of the 4 departments in plant science into Plant Sciences, the department has no plans for further consolidation with other departments or changing in a substantial way the departmental organizational model.

Plant Sciences would like to mention that College Special Facilities are a crucial component to carry out research and outreach activities associated with the Land Grant mission. For example, a department of (applied) plant science in a Land Grant university without an experimental farm is not a viable model.

CPC Departmental Information Requested on January 5, 2010
Textiles and Clothing
January 21, 2010

The Division of Textiles and Clothing (TXC) is staffed with five physical and social science faculty (3.0 I&R and 2.0 AES) and one lecturer (0.5 FTE). A faculty member is anticipated to retire at the end of the 2010-11 academic year, representing a 20% FTE reduction. The Division hosts several integrated academic programs, i.e., two undergraduate majors (Fiber and Polymer Science, FPS; Textiles and Clothing, TXC), one graduate program (Textiles Graduate Group) and the National Textile Center, an eight-university research consortium. Our undergraduate curriculum consists of three lower and seven upper division TXC lecture courses and three upper division FPS lecture courses and three laboratory courses. Laboratory is also an integral part of a lower division course and discussion sessions are included in four courses. There are a total of 12 lower division units and 24 upper division units in TXC courses and 10 upper division units in FPS courses. All TXC and FPS courses are core courses, i.e., required for the two undergraduate majors, while also serve the campus and fulfill one or more of the GE components. In addition to about 100 majors in our undergraduate student body, there are about 50 minors. The faculty also offers five graduate courses typically in alternate years. Three of the graduate courses are cross-listed as FPS/EMS (Material Science in Engineering) offerings. On an average, each faculty teaches three courses a year, in addition to team-taught, graduate and seminar courses for a total of 12 units teaching load.

A. Teaching:

- *The most immediate and critical teaching issue of concern is the FTE attrition associated with a retirement in the social science area starting in Fall 2011, specifically in textile marketing and international trade, core for our Economics and Marketing option within the TXC major. The loss of this expertise will be quite problematic for the major, as well as the College and campus, especially given the recent elimination of ARE 113. Other courses that purport to include at least some material on international trade are being examined as alternatives to fill the gap in our curriculum. One example is ECN 115A (Economic Development).*
- *Another major teaching issue of concern is the continuing reduced TA support which impacts our ability to maintain the size of large enrollment courses and laboratory and discussion sessions. Our largest enrollment course has about 200 students and six other courses have enrollments of 80 to 120.*
- *Our highest priorities in undergraduate education are our two majors, i.e., TXC and FPS. There are over 100 students in these majors and approximately 50 minors. We are exploring options with faculty across the campus to revise these programs to become inter-departmental and inter-college in scope and delivery.*
- *Recent and proposed changes in our undergraduate curriculum include the ongoing development of an inter-deparmental biomaterials science curriculum using the FPS major as a platform. We are also pursuing ways of streamlining our TXC curriculum and collaborating in curricular development with other departments and colleges.*
- *Potential inter-departmental and inter-college synergies can be built between TXC and several other programs on campus. The FPS major is currently under discussion*

to become the biomaterials science major in collaboration with BAE, FST, ETX and Plant Sciences initially. We envision that the TXC major can connect and coordinate curricula with the Design, Women and Gender Studies, and Asian American Studies undergraduate programs in Humanities, Arts, and Cultural Studies (HArCS) in L&S. Although these connections and collaborations can add new dimensions to the existing curriculum, the critical marketing or international trade components will still be lost unless supplemented with future faculty or lecturer FTE.

- *We are making some revisions to the Textiles Graduate Group to include a core interdisciplinary (physical and social science integrative course in concepts and methods) course, three interdisciplinary research seminars, and disciplinary coursework in Textiles or other graduate programs. The latter will be affected by the previous stated retirement, which will cause us to lose the ability to teach the graduate level class on textile and apparel marketing concepts and methods. Depending on students' interests and backgrounds, they can take advantage of other classes such as SOC 201 (Social Research), SOC 206 (Quantitative Analysis in Sociology), MGT 248 (Marketing Strategies), MGT 249 (Marketing Research), VEN 200 (Introduction to Scientific Methods), and PSC 207 (Survey and Questionnaire Research Methods). Members in the graduate group from other departments who can direct students with an interest in consumer psychology and decision making include Joel Johnson and Hildegarde Heymann.*

B. Research:

Anticipated additional FTE reduction will impact social science research as well as interdisciplinary research programs where social science plays a major role. For example, we are currently completing a multi-year, interdisciplinary research grant from NSF's Material Uses in Science and Engineering (MUSES) program in the area of medical textiles to develop and extend better materials and approaches that are not only health-protective, but also economically, environmentally, and politically sustainable. We are also leading a cross college and school interdisciplinary collaboration in an Integrated Graduate Education and Research Training (IGERT) preproposal on "green textiles for human and environmental health".

- *highest* priority (a) disciplinary research areas:
  Fibrous and biobased materials; consumer behavior or consumer cultural studies (including a transnational trade and marketing perspective)

- *highest* priority (b) interdisciplinary research areas:
  Sustainable materials for human and environmental health

- *highest* priority for future FTE hires for both (a) disciplinary and (b) interdisciplinary areas
  Biologically derived fibers, chemicals (dyes, finishes, coatings) and materials; Consumer cultural studies (including a transnational trade and marketing perspective)

- *Inter-departmental FTE* that meets the needs and strengthens two or more departments
  TXC/FST*: natural products; fiber/food macromolecules; packaging*
  TXC/BAE/FST*: biobased mateials including biorefining*
  TXC/ETX*: green chemistry; impact of textile finishes and chemicals on human health and environment; nanomaterials; industrial effluent*
  TXC/FST/VEN*: sensory science; processing and utilization of byproducts*
  TXC/FST/VEN/ARE/HCD*: consumer science (behavior, marketing, trade, culture)*
  TXC/Public Health: *human protection, occupational safety*
  TXC/Plant and Animal Sciences*: biomimetics, plant/animal cells and byproducts*
  TXC/ Chemical Engineering and Material Science/Chemistry*: advanced materials for solar and electronic applications; flexible high temperature inorganic fibers; soft materials (biological, fibrous); nanotechnology (nanofibers, nanowiskers, nanoparticles, nanoassemblies); forensic science*
  TXC/HARCs*: fashion/cultural studies; functional product design*

- *New research centers on biomaterials and bioproducts, consumer culture and sensory science that would enable interdisciplinary research across departments within the College. Some aspects of "identities" (organic materials science, consumer behavior) will not only be retained, but new areas will emerge and flourish in a more expansive way.*

C. Outreach:

- *TXC does not have any Cooperative Extension (CE) FTE. New CE FTE in the area of bioproducts and biomateials is critically needed due to the vast quantity and diverse range of biomass, feedstock and bioresources as well as the value added nature and the importance of consumer behavior in the perception, acceptance, consumption and life cycle aspects of the new and alternative products.*

- *Both sustainable materials and consumer behavior areas find beneficial collaboration and alignment with the Agricultural Sustainability Institute, Institute of Bioenergy, International Programs, California Institute of Food and Agricultural Research, Research Information Center, DANR's Research Extension Center.*

D. Strategies:

- *TXC has been actively consulting and directly collaborating with other departments within the College in academic (BAE, FST, ETX) as well as administrative (ETX, WFCB) collaborations.*
- *A simple and universally recognized organizational model that provides disciplinary identity (I&R) as well as programmatic vision (AES) would well serve the College's long-term interests in terms of scholarship and service to society:*
  - *Human Sciences/Ecology*
  - *Agriculture/Life Sciences*
  - *Environment/Ecosystem*

Department of Viticulture and Enology
College Planning Committee Survey
January 25, 2010

A. Teaching

Attrition Concerns: The Viticulture and Enology major is highly interdisciplinary. We do not rely on extension specialists to teach production-oriented undergraduate courses, faculty do so. We have a limited capacity for redundancy, such as in chemistry or microbiology where we have two faculty members in those disciplines. In some areas, however, we have only one person who can cover a course, for instance sensory science. So, a loss here would nearly disable the degree. There is a possibility, that with further loss of specialized knowledge, we could share some core courses with Food Science, but this would significantly erode the skill of our graduates. We already share training in the optional areas of our degrees. However, considering the loss of expertise that would come with much attrition, we would no longer be able to offer the curriculum that underpins our majors and as a result seriously compromise our quality and international standing as a leader in the field.

The **highest priority** in instruction is sustaining our Viticulture and Enology major. This major provides the production work force for the state's $50 B wine and grape industries and by doing so sustains those economic enterprises. The main reason we are organized to have ladder faculty teach production-oriented classes is to assure that our research, teaching and extension missions are fully aligned. A recent external review of our performance as an economic engine for the state of California strongly supported the value of our operational practices in teaching.

With the opening of the new winery next fall, several of our courses will significantly change to take advantage of the new facility. In the Wine Production course, students will be able to conduct winemaking experiments on a commercial scale using state-of-the-art facilities. . This will require a major reorganization of this laboratory, but Professor Bisson has been planning that for some time. We are also planning to incorporate the new facilities into other courses such as our winery technology and design, to allow more hands on production scale experience.

It is clear that our students could benefit from more knowledge and understanding of production economics as well as background in some business issues, especially marketing. We have been working with ARE to get a course in place, and we are now proceeding with plans to implement a Professional Science Master's program that would incorporate science and business courses. We would envision broadening this training, ultimately to the BS students as well. This year our "Science Master's" proposal to NSF to fund this program was selected as the campus submittal for $700K in support. We will hear about the fate of the proposal in a few months, but plan to proceed regardless.

Other Departments that could possibly assist in core courses would be Food Science in the enology area, although in core courses, if these efforts were combined with Food Science offerings, the instruction would naturally compromise the wine specific educational outcomes. The viticulture area is fairly specialized in issues related to *Vitis vinifera* and details related to production management. There is already some participation by others in a course on pests and diseases, where in fact there is much expertise outside the Department. We also have USDA

scientists assisting in teaching by giving guest lectures and for years had an adjunct faculty member teaching an economics course for the department. These types of arrangements could be more fomalized and enhance our teaching capacity, but again, the specialized nature of some of our core courses would make this difficult in most cases.

Graduate programs that would be affected by reductions in our faculty are very dependent on who is involved due to the interdisciplinary nature of the Department. However, they would include the following: Agricultural and Environmental, Chemical Engineering, Ecology, Food Science, Genetics, Horticulture and Agronomy, Microbiology, Plant Biology, Soils and Biogeochemistry, and of course Viticulture and Enology. Faculty in our department teach in many of these graduate programs and hold leadership positions as chairs of groups or advisors. At one point we had the chairships of four different graduate groups in our department of 11 faculty. There is a strong commitment to graduate education among the current faculty.

B. Research

It is not possible to conduct research on the wine grape system with a single discipline, so it is also not possible to rank the importance of disciplines. However, there are two major research foci of the Department.

1. Flavor is one of the key research topical areas of importance in viticulture and enology. This starts with grape genomics of flavor and its expression as precursors, as well as the genomics of the yeast and bacteria that convert the grape substance to wine aromas and taste factors that affect sensory qualities. The environment in the vineyard affects the expression of flavor, so plant physiologists and viticultural experts are needed to help translate observed effects into production related information. Chemistry is a partner at nearly every step, analyzing the grape components that lead to the wine aromas, studying the microbial transformation, and then the subsequent aging chemistry that results in the final product. And finally sensory science ties everything together. In addition, other areas not mentioned also play a role in altering flavor, such as in processing or the effects of vineyard diseases.

The missing expertise today is grape genomics. Due to budget cuts at the time, a search was closed on this area in 2003, so we have lacked leadership in this area. The campus lost the USDA grape genomics program to Cornell, a blow to our research prominence in this area. A major effort to undertake the grape genome at UCD at that time, which was led by a colleague in the Department of Plant Sciences was derailed when he was denied the ability to seek a joint appointment in our department and it was left to the French and Italians to announce their success on completion in 2008. This is an area where a joint appointment was and still would be most welcome.

Other areas where joint appointments would be welcome would be in areas of plant pathology, nematology and entomology, as well as agricultural economics. There are already scholars in these areas who have well funded research programs on grape and wine topics and who could help with some instruction. We understand that a large number of faculty have self-identified with our Department.We think that with our new winery and the novel green design and operational goals, faculty in disciplines outside of the college will also be interested in some type

of formal relationship with our department. In fact four faculty from the College of Biological Sciences have already expressed an interest as have faculty from the College of Engineering.

2. Sustainability is the second key research foci in the Department. This issue is embedded in most of the viticulture courses. This begins with breeding for local problems, to studying the feasibility of reducing water use in viticulture, to the questions surrounding greenhouse gases in vineyards and the cultural practices that affect both greenhouse gases as well as optimizing the rootstocks and scions for specific sites. In enology, the new winery is being constructed specifically to be a test bed for sustainable practices and it will open the door to a large number of experiments on reducing water and power consumption in processing. Again we expect these capabilities will lead to interest among other faculty in joint research endeavors.

The Department is already an interdisciplinary unit.

C. Outreach

Extension and outreach in three different grape cultivation commodities has been sustained with limited success over the years to include wine and table grapes as well as raisins. On the other hand, the large differences in business models in the San Joaquin valley compared to coastal valleys really require different approaches to production and thus different extension tracks. However, our highest priority is to sustain leadership in both viticulture and enology areas, so having at least one person in each area is the most important.

We believe it may be possible to find financial support from commodity groups to help sustain positions in outreach, either by direct gifts or via extension and outreach activities that generate revenue.

We are already initiating a center to address the gaps in enology extension. This is headed up by Professor Linda Bisson and relies on a workshop format for direct instruction, coupled with a website for reference materials, as well as recordings of some prior events. Some distance ed formats, such as webinars, have been explored. So far, the first year's efforts appear to be very successful.

D. Strategies

The questions raised above suggest that the College is in fact not planning to stop doing some of the things it is doing now in order to manage further cuts. Instead, it appears that we are considering incremental cuts across the board, but by sharing teaching duties or research expertise with a goal of hiding those cuts under a Departmental reorganization scheme. This will simply dilute the expertise we now have in many of our research and teaching areas.

There are plenty of examples elsewhere with "viticulture and enology" programs being organized between a Food Science department and a Horticulture department with one or two people assigned to teach "wine" and "grape" courses, and have a project or two in related areas. We can certainly start down the road towards diluting the specialized expertise in our teaching with generic disciplinary instruction and a few examples in one or more topics of interest. But if

we want to retain international leadership in what remains in the College after the serious cuts we now face, the answer is not to merge that expertise away into a few disciplinary experts who know a little bit about every crop, etc.. Instead, we must envision a smaller College where we have retained the depth of skill and expertise to be the world's best in both research and teaching.

WFCB RESPONSE TO "DEPARTMENTAL INFORMATION REQUEST" BY THE CPC

Preface – The role and context of WFCB. WFCB is the only academic unit within the entire UC whose mission is to study the ecology and conservation of wildlife and wild fish species and address societal concerns over their well being and their management. The department exists "to promote research and understanding of the biology of wild vertebrates, including native, non-native, and pest species, with the goal of improving management of these species for the people of California and elsewhere"[1]. Moreover, WFCB is the only PhD-granting program (through various graduate groups) in California emphasizing wildlife and fish, and one of only 5 universities in the western states to do so. WFCB emphasizes the balance between pedagogical and research needs, as well as the service and outreach roles that we are expected to fulfill. Since its inception, the Department has strategically planned all recruitments to simultaneously maximize our ability to meet a clear and focused teaching mission as well as a problem-driven set of research programs addressing issues of concern to our stakeholders, the citizens of California. We have explicitly avoided recruitments that duplicate teaching and programmatic emphases already present at UCD. This has ensured that we retain a focus on the programmatic objectives on which our program was founded. We continue to believe these objectives are critical to the future of UC, UCD, and California.

Departmental Information Request (3 pg) - January 5, 2010
College Planning Committee
Due Date: January 21, 2010

The College Planning Committee (CPC) is seeking information from departments as we work to develop recommendations regarding alternative organizational models for the CA&ES that:

1) Define the cutting-edge areas of scholarship of our College;
2) Maintain a world-class reputation of scholarship and leadership in these scholarship areas;
3) Consider impacts on departmental and inter-departmental undergraduate and graduate programs, as well as meeting the mission of Cooperative Extension;
4) To the fullest extent, take advantages of opportunities that may arise because of College reorganization, such as consideration of additional inter-departmental research centers that champion topical research areas across departments.

Although the CPC has access to departmental academic plans, these generally provide the rationale for additional faculty FTE in growth areas. Since the College is planning for a *minimum* FTE reduction of 10% (or more likely 15-20%) within the next 5 years, the CPC is seeking your departmental input on the *highest* priority teaching, research, and outreach programs that you identify to be retained in the College. We hope the questions below will be helpful to engage your departmental faculty in substantive discussions about priorities and opportunities that exist among departments and thus the College as a whole. In your response to the items below, we ask that you bear in mind *the realities of the budget crisis facing our college and report openly on ideas* for planned collaborations among departments

[1] WFCB Academic and Strategic Plan, 2008-2013. Prepared December 2007.

to enable the future continuation or development of successful programs despite faculty attrition.

We ask that you distribute this document to your faculty and then at a faculty meeting seek their input and ideas (in particular engaging your newest hires) in addressing the following points. Please keep your responses brief (*bullet listings encouraged*) to allow for straightforward interpretation by the CPC.

WFCB Response: The Department of Wildlife, Fish, & Conservation Biology met to discuss diverse options for our future, and to initiate discussion on the specifics of the CPC Request. Following our meeting, the Chair circulated an abridged version of the CPC Request with annotations outlining preliminary Departmental responses. The following responses are based on this feedback and further discussion with departmental colleagues. More than one faculty colleague expressed frustration that many questions posed are highly contingent on the results of the reorganization process in which we are engaged. For example, teaching implications assuming a smaller faculty depend very much on ***which*** faculty is/are removed from consideration. This is not a criticism of the Request or of the CPC, but recognition of the complexity and plurality of issues we face at this time. The following responses are a "best assessment" of the implications of conditions outlined in the CPC request.

A. Teaching:

Please examine the composition of your department's teaching capabilities assuming a smaller department (10% fewer faculty at a minimum) and consider also the expertise of faculty hired during the last 15 years. *Possibly, through existing and new inter-departmental collaborations, the highest priority teaching requirements could be satisfied. We are asking for your input as to what is at risk and also what are the alternatives (other than new hires) from across the College (or entire campus). One could, for example, envision broad majors that include disciplinary areas of emphasis to retain essential specialized courses, even if the college must reduce the number of majors (currently we have 37 majors in CA&ES).* Within that context:

WFCB Response: Instructional programs in smaller departments such as WFCB are less buffered to reduced FTE (e.g., less redundancy among faculty) than are those of larger departments. Hence, smaller departments are more limited in their ability to cover core instructional needs while reducing FTE. This does not constitute a need for merger, because smaller programs generally have distinct instructional needs, which often are not duplicated elsewhere on campus or elsewhere in UC. This is the case for WFCB.

- Please indicate teaching issues of concern, such as core course teaching coverage and teaching workload issues that are going to arise from FTE attrition in the coming years.

  WFCB Response:

  - WFCB has very few immediate concerns in this arena. We recently recruited 2 Asst. Prof. to fill critical teaching needs, and we foresee no retirements in the immediate future. Consequently, although additional

FTE would allow maturation of strategic programmatic areas, these are not essential to our program. We envision programmatic stability for the foreseeable future.

- "Issues of concern" with any reduction in FTE will depend entirely on the faculty position(s) lost. Because WFCB has a unique program there is minimal duplication of faculty expertise across campus, such that most losses would result in campus-wide loss of expertise for focal courses. Some courses could be picked up by other WFCB faculty, whereas others could not. Most WFCB courses focus either on specific areas of wildlife/fish/conservation biology (e.g., Human-wildlife interactions, Physiological ecology, Behavioral ecology, Conservation biology, Population estimation and modeling) or are survey courses requiring broad knowledge within a given taxonomic group (e.g., Ecology & Conservation of wild fishes, birds, mammals). For most WFCB courses, there are no faculty elsewhere on campus with appropriate expertise (and certainly available time) to teach them.
- Proposed reductions in TA support are likely to create major problems for our students. Training in our field requires laboratory and field courses (including species identification, field methods) which mandate TA support. We concur with our many colleagues who note that TA support provides the best pedagogical bang for the buck, while simultaneously training the next generation of educators by providing them with on-the-job experience.

- Identify your highest priorities for undergraduate education (e.g., majors, minors, service courses, participation in or development of inter-departmental majors).
  WFCB Response:
  - Our highest priority is to our Majors, who comprise the core of our constituency. Thus, priority is to continue to offer required courses and to maintaining excellence in these offerings.
  - Our second highest priority is to continue to offer our increasingly popular General Education courses for lower division students, and to develop additional courses to complement our existing catalog.

- Identify any recent (last few years) or proposed changes in your undergraduate curriculum as a result of priority setting.
  WFCB Response:
  - WFCB recently revised our BS degree (approved December 2009) to streamline requirements and reduce the number of "Areas of Specialization" and provide a more focused major that assures students are able to complete the degree in a reasonable period.
  - WFCB also has proposed a Bachelor of Arts (AB) degree in *Wildlife Conservation* which was positively received by the CA&ES Executive Committee. The objective with this program was to provide a general UC education in the field of natural resources for students who do not intend to become practicing biologists – a CA&ES equivalent to such

degrees as English, Political Science, History, and Psychology. Because development of an AB degree will require revision to College bylaws, the proposal is pending resolution of the broader question of whether the College is interested in a second category of undergraduate degree.

- WFCB also has discussed the possibility of greater involvement with the *Animal Biology* major. We are concerned that the current structure of this program may not be tenable (e.g., finding a faculty mentor for their Senior Practicum is proving very challenging for many of the 200+ students in ABI) and so we also would be interested in working with other potential "home departments" to reconsider the nature and structure of this program.
- We have been increasing our offerings of lower division General Education courses (WFC 10, 11, the new WFC 50) to better serve non-majors as well as students who have not made up their minds about what major to declare. These classes have proven highly popular, filling as soon as they are offered. With additional resources, we could increase student numbers considerably (including attracting students from other colleges) by expanding these courses.
- WFCB envisions a well-funded, integrated General Education course on "The Future of the Natural World" or "The Future of Natural California" aimed at informing students of the global environmental crisis, including impacts of climate change and elevated extinction rates, and importantly what they can do about this as citizens. We regard this subject matter as having such trenchant importance that such a course should be required of all UCD students, at least those within CA&ES. Such a course would have to be carefully designed to integrate the best lecturers on campus, include dramatic visuals, hands-on activities, and abundant student-teacher interactions. WFCB could take the lead in this course but it would require a committed core of faculty from numerous (perhaps all) departments in CA&ES.

- List other College (or campus) departments that could *possibly* assist in the teaching of core or service courses, and delivery of majors, departmental or inter-departmental.

  WFCB Response:

  - Three departments at UCD have the potential to assist with delivery of WFCB core instructional needs; however, WFCB curricular needs have been developed to *complement* existing programs, and as such they are distinct from those of other departments. Moreover, our respective recruitments have focused on sufficiently different programmatic objectives that we do not see faculty in these programs that are able (much less available) to "fill in" for reduced FTE in WFCB. The few possible synergies are outlined below:
    - ANS – faculty in ANS have an organismal emphasis (as with WFCB), but their focus is largely on domestic or agricultural animals, with less expertise and emphasis on the wild species that are the focus of

WFCB courses. One possible exception might be our upper division course on the ecology and conservation of wild birds, although our coursework emphasizes *non*-domestic & *non*-agricultural species. In addition, ANS has lost many of its avian ecologists and recently voted to eliminate the Avian Sciences BS. As such, they are not currently in a position to assist with this course.

- ESP – most faculty in this department emphasize policy or basic (not applied) ecology; those emphasizing applied ecology or conservation generally work on plants or invertebrates. We see little room for assistance from ESP in existing WFCB courses.
- ETX – with recent retirement of Dan Anderson, ETX might be able to fill in existing gaps in wildlife ecotoxicology, although this is not required under our revised BS program.

However, consultation with WFCB faculty has revealed that use of departmental mergers to satisfy core teaching needs, coupled with an "open access" policy for WFCB faculty, likely will lead to loss of faculty from the WFCB academic program; this loss will create critical teaching needs that do not now exist.

- In addition faculty reductions will likely result in reduced faculty availability for graduate teaching. Please list the graduate programs likely to be affected by attrition in your department.
  WFCB Response:
  - WFCB participates actively in both the GGG and the GGE, including core instructional support for GGG.

B. Research:

Anticipated FTE reduction and College reorganization will undoubtedly impact departmental research programs. In addition to maintaining the highest priority disciplinary areas in your department, reorganization could include seeking cross-departmental interdisciplinary collaborations that may lead to successful interdisciplinary grant funding. These could be both within and across colleges:

- List *highest* priority (a) disciplinary, (b) interdisciplinary research areas in your department and indicate the need for corresponding future FTE hires for both (a) disciplinary and (b) interdisciplinary areas. (FTE will be distributed in the coming years, as we accommodate the need for reductions overall). Have you considered FTE that might be hired in more than one department? Are there consolidations your department could consider which would strength two or more department's weaknesses due to attrition to be able to retain a scholarship strength within our College? Please identify possible departments.
  WFCB Response:
  - One feature that distinguishes WFCB is a strong commitment to ***both*** teaching and research needs; as such, our priorities are clearly

delineated within our academic plan. However, any recruits will be expected to have a strong commitment to interdisciplinary teaching as well as strong involvement in graduate groups and interdisciplinary research, continuing our long-standing traditions in these emphases.

- Highest priority disciplinary research areas.
  - Applied vertebrate ecology and conservation. WFCB faculty all emphasize the integration of organismal ecology and natural history with the conservation and management needs of State and Federal planners. What sets WFCB apart is that we address problems and answer questions pertaining to native and non-native wildlife and fish species. This is a unique role within UC.
- Future disciplinary FTE – replacements.
  - Avian Conservation Biology. With the recent retirement of Dan Anderson the campus has lost yet another avian ecologist. With the exception of Anderson's focus on environmental toxicology, the emphasis on avian conservation biology remains very strong with Dr. John Eadie's well-known research. Nonetheless, UCD has been shedding avian expertise over the past decade without replacement, and WFCB hopes to recruit another avian-focused ecologist/ conservation biologist at some point. This person would likely have strong interactions with ANS, as does Dr. Eadie.
  - Conservation Biologist, emphasis on fish/watershed (freshwater or marine). In spite of all contrary indications, Peter Moyle is human and will retire someday (although we are pleased that no signs have been given as of yet). However, his expertise with fish/aquatic ecology and the impacts of invasive species is widely recognized and is not duplicated elsewhere in the UC system, and as such should be a high priority replacement in the future. California's fish diversity is impressive, yet the number of applied fish ecologists is remarkably limited. Because 65% of the state's native fishes, including most salmon, either are listed as endangered species or are in serious decline, virtually every water-management decision in the state has to (or will have to) take their biology into account. WFCB envisions a faculty member whose research emphasizes the conservation biology of aquatic systems, emphasizing either fish species (complementing and ultimately replacing Peter Moyle) or the broader ecology and functioning of watersheds and their ecological role as critical links between terrestrial and aquatic systems.
  - Quantitative Vertebrate Population Biologist. Dr. Loo Botsford has developed a strong internationally acclaimed program applying quantitative tools to understanding the impacts of contemporary threats to biological diversity, most notably in marine fisheries. While other quantitative ecologists exist at UCD, none emphasize the "on-the-ground" application of sophisticated quantitative methods to management decision-making that Dr. Botsford has. Consequently, his retirement (fortunately, far in the future) should be followed with

allocation of an FTE to replace a programmatic strengths (and teaching) that makes WFCB and CA&ES an important contributor to the critical management questions that policy-makers are facing, especially in the marine realm. Management of California's remarkable natural diversity requires quantitative approaches. Opportunities for applied conservation are abundant, yet expertise is quite limited. The potential interface with both state and federal agencies (e.g., Cal. Fish & Game, US Forest Service, US Geologic Survey, US Fish & Wildlife Survey, etc.) is extensive and likely to strengthen ties between UCD and the agencies that regulate and manage California wildlands and wild species.

- Future disciplinary FTE – potential growth positions.
  - Conservation Geneticist. Bernie May (ANS) is threatening to retire, and John Eadie (WFCB) has closed his genetics laboratory. The application of genetics in conservation of natural resources is a large field that continues to grow. Further UCD expertise in this arena, focusing on wild vertebrate species, would provide important input to State and Federal managers and regional planners, complementing existing strengths in applied vertebrate ecology and conservation.
  - Wildlife/fish management. Expertise in this field does not exist at UCD. Yet, state agencies look to UC for guidance in managing species of conservation concern as well as those which are subject to harvest. This differs from positions listed above (Cons Biologist, Quant Vert Pop Biologist) in emphasizing active management of game populations, including habitat manipulations for target species, etc. Importantly, this position also would fill a teaching need that is lacking within UCD, and would be expected to develop 1-3 courses on the applied management of wildlife and fish species in the diverse habitats of California.
- Highest priority inter-disciplinary research areas and future FTE.
  - Because of the applied emphasis of WFCB faculty research, all areas listed above inherently integrate basic/conceptual ecology with applied/conservation ecology and societal needs. As such, new or replacement FTE outlined above *necessarily* integrate disciplinary and interdisciplinary areas, which is characteristic of WFCB faculty. We envision such faculty integrating with diverse programs and faculty (economics, engineering, modeling, policy, human & community development, etc.) to seek solutions to the difficult problems facing California including climate change.
- Possible multi-department hires.
  - Interdepartmental hires imply conceptual overlap across departments, which implicitly calls to question the rationale underlying departmental structure. Because WFCB is unique in CA&ES in its focus on solving problems with vertebrate species and on applied vertebrate ecology, there may be relatively few opportunities for interdepartmental FTE. Some of the positions outlined above (e.g., Avian ecologist,

Conservation geneticist) could be considered for multiple departments, but most would be more effective if hired within a single department.

- Possible faculty consolidations.
  - WFCB doesn't see any viable FTE consolidations as our faculty were recruited with specific pedagogical and research objectives, and these lack replication across the campus. In our entire history, WFCB has strived to ***complement***, not duplicate, existing expertise at UCD.

- Suggest future new research centers (organized by existing faculty) that would enable interdisciplinary research across departments of the College, despite reduced departmental FTE or any departmental reorganization, and would allow "identities" to remain even if departments change.

  WFCB Response:
  - Landscape-Wildlands Management. This center would focus on holistic integration of urban, rural, and agricultural development with sustainable management of wildlife and fish populations. It could promote understanding of wildlife and fish needs, and resolution of conflicts between the sustainable management of California's rich natural diversity within the framework of a growing and expanding human population.
  - Putah-Cache Creek Bioregion Center. This center would focus on ecological, social, and economic problems in the region in which UCD sits. If could promote and support projects such as resolution of conflicting management needs in the Yolo Bypass for urban water, farming, and fish & wildlife conservation.

C. Outreach:

Given the wave of Cooperative Extension (CE) retirements expected very soon and that in the future the College will have fewer CE resources:

- List the highest priority areas of extension and outreach for retention that (a) meet state needs for stakeholders (b) will sustain/foster the CE/Farm Advisor continuum and (c) align with departmental priorities.

  WFCB Response:
  - As with I&R FTE, WFCB has strategized through its history to seek CE positions that address pressing extension and outreach needs. These are numerous and diverse in California, and many remain poorly addressed. Currently, WFCB has a single Specialist in CE, and retention of that position is critical; fortunately, this faculty member is not approaching retirement.
  - The highest priority areas of extension and outreach for WFCB include:
    - Freshwater & Anadromous Fish. Position currently held by Lisa Thompson. This is a highly successful program but further FTE really are needed to suitably cover the entire state. Specialist Thompson has done a remarkable job and is increasingly seen as one of the "go

to" people for questions about California fishes, and loss of this program would be particularly damaging to the future of these important species.

- Marine Fisheries. WFCB recently lost a Specialist in this area (Chris Dewees), and a subsequent search to replace this person failed. WFCB is eager to replace this position.
- Human-Wildlife Interactions (traditionally, Wildlife Damage Management). WFCB has had Specialists in this area (most recently, Terry Salmon and Desley Whisson) but Dr. Salmon currently is Director of Cooperative Extension in San Diego County, and Dr. Whisson returned to Australia to supervise a wildlife refuge. Issues in this continue to rise – bats, beavers, starlings, feral pigs, bullfrogs, etc. – and further extension expertise in this should be a high priority for the University.
- Wetlands & Waterbird Management. This area has received little attention in Cooperative Extension. WFCB believes that CE expertise in wetland and waterbird management would allow UC Davis to extend knowledge on insightful management of these key environments, with the possibility of reducing losses of waterbirds and improving the fate of salmonids among other fish species. Well over 90% of California wetlands are damaged and degraded, yet the Central Valley hosts large and important concentrations of migratory birds due to its position within the Pacific Flyway. Fish populations in California are in dire condition, from montane streams to estuarine and marine species. These issues are related, and truly what's good for the goose is good for the – well, the salmon.
- Wildlife Habitat Relations & Conservation Planning. Our specialist in this arena (Dr. Lee Fitzhugh) retired several years ago, leaving a critical gap in extension coverage. A specialist in this area would integrate the broader applied vertebrate research at UCD with a growing constituency of landscape planners, developers, ranchers, foresters, etc., and has tremendous potential to facilitate rational and sustainable use of California's diverse habitats.

- Have you considered opportunities to realize departmental highest priority areas by organizing outreach centers such as RIC's (Research Information Center, http://rics.ucdavis.edu/), or via ANR REC's (Research Extension Center, http://danrrec.ucdavis.edu/), or by other suggested means?

  WFCB Response:

  - Specialist in CE Lisa Thompson has developed a website on California fishes, which includes information on biology, management, distribution, etc. This is under construction, and we look forward to further development of this site. Further RICs are not an option until further positions are obtained.
  - Because RECs are organized and run well above the Department level, and most of which are almost continuously threatened with serious fiscal

constraints, it is not clear to us how we might consider organizing these within or between departments.

D. Strategies:

Please list other strategies being considered by your department to deal with attrition and potential FTE reductions:

- Is the department consulting directly with other departments within the College or seeking collaborations between departments?
  WFCB Response:
  - WFCB is actively discussing opportunities for collaboration with Chairs of ANS, ESP, and ETX, all three of which we view as potential partners to get through these challenging times. All three departments offer both costs and benefits to close collaboration, and we are in the process of assessing which, if any, would allow resolution of the constraints we all face with diminishing FTE, while supporting a dynamic and productive program in applied ecology and conservation of wildlife and fish species.

- Do you have ideas for a new organizational model involving your department?
  WFCB Response:
  - WFCB envisions several possible futures. These include:
    i. Remain independent. This allows retention of control over teaching needs and future FTE. The potential cost is small size and resulting staffing limitations, although staffing limitations have been solved by administratively clustering with ETX and TXC.
       1. Same size. WFCB has never exceeded 10 FTE in its almost 40 years of existence yet it has continued to be highly effective at delivering its academic program. We know from experience that we remain capable of delivering our mission – teaching, research, service, outreach – with a faculty of ca. 9-10 faculty.
       2. Supplement FTE to larger size. We stress that WFCB has never exceeded 10 FTE; we believe that are fully able to continue our mission of excellence in teaching, research, and both service and outreach with a faculty of 9-10. Additional FTE would allow for integration of novel facets of wildlife and fish ecology and conservation, and possibly allow us to extend our programmatic strengths to areas heretofore not pursued.
          Supplementation could be achieved either by lateral moves of existing CA&ES faculty, or by establishing new FTE targets as part of a long-term strategy to build on existing strength and expertise (we recognize that current economic conditions mandate an overall reduction in CA&ES FTE).
    ii. Merge. As noted above, we are actively in discussion with 3 departments to assess the feasibility as well as the nature of potential mergers or closer collaboration. WFCB concurs with Dean Delaney's

view that "submerger" – mergers of departments of very different size without common strategic objectives – has the potential to inadvertently lead to a loss of programmatic focus as the smaller department lose control over teaching, budget, and perhaps most importantly over future FTE. An example of this is the recent decision by ANS to terminate their BS program in Avian Sciences. With this in mind, discussions with other departments include consideration of these issues (from all sides) to ensure that a merger helps to build and strengthen CA&ES programs rather than to dilute or extinguish them.

Principal criteria for WFCB are the long-term retention of our programmatic objectives and strengths, with a focus on most effectively educating the next generation of wildlife and fish conservation biologists, and on continuing our history of research strength in applied vertebrate biology.

AS NOTED AT THE BEGINNING OF THIS DOCUMENT, WFCB IS VERY CONCERNED THAT MERGER, IN ASSOCIATION WITH DEPARTMENTAL "SELF-SELECTION" BY FACULTY, WILL LEAD TO SEGREGATION OF EXISTING FACULTY TO DIFFERENT HOME DEPARTMENTS, WITH DIRE CONSEQUENCES FOR THE PROGRAM.

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iii. Novel departmental structure, as indicated above. Examples might include "Conservation Biology" or "Natural Resource Management and Conservation."

- Please provide other relevant comments.

  WFCB Response:

  - The APC concluded that all 18 departments in CA&ES were outstanding and that a ranking of "best to worst" was infeasible. They concluded that 8 departments were large enough to be "stable" in the face of pending budget cuts, and 7 were "of concern" in that their size raised concerns over retention of this excellence in the face of such cuts. The APC explicitly noted that these 7 departments should be given priority in resource (e.g., FTE) allocations to ensure their continued strength. These recommendations have not been pursued. To ensure that CA&ES remains a leader both pedagogically and programmatically, consideration might be given to the option of disproportionately impacting larger departments in the immediate future to allow smaller programs to maintain their excellence. These disproportionate losses to larger programs could be compensated in future allocations. However, it is the programmatic diversity of CA&ES that sets it apart from "just another ag school." We should support and promote this diversity.
  - Some specific considerations follow.
    i. CA&ES needs to establish a basic philosophy of organization that applies to ALL departments. For example, if perceived similarities in

mission are the basis for merging departments, why is Plant Pathology distinct from Plant Sciences? Is this more or less conceptually distinct than WFCB vs. other CA&ES departments?

ii. CA&ES should establish firm guidelines for setting priorities in the assignment of new FTE to departments. Some suggested factors contributing to a high priority rating would include:
    1. distinctiveness of program to UCD, UC, and California,
    2. number of students in courses, especially GE courses,
    3. number of students in the departmental major,
    4. statewide need for departmental research and teaching,
    5. size of department,
    6. contribution to graduate education, and
    7. contribution to extension in relation to departmental size.

iii. CA&ES should look to the future and ask what "Big Problems" are going to benefit most from CA&ES involvement. This is likely to mean getting away from traditional areas (e.g., plant sciences with 100+ faculty) and putting resources into high demand areas (e.g., environmental biology, water management).

iv. AES appointments need to be accountable. We applaud Neal Van Alfen's appointment of the TARC (Term Appointment Review Committee) to assist faculty in recognizing the expectations associated with AES appointments.

v. Specialists in CE should be renamed Professors of Cooperative Extension. "Specialist" sounds too much like "Assistant," conveying lesser status to stakeholders and thereby hindering their ability to carry out their important missions. They also should be part of the Academic Senate.

vi. FTE allocations should be assigned as much on teaching and advising needs as on research programmatic needs or strengths. Student (and public) demand should be considered in FTE allocations; this would help to reduce the number of departments with numerous faculty but few students.

vii. The number of students in a major should be given greater weighting in RAC allocations, with compensatory reductions in student credit hours. The latter leads to competition that is damaging and counterproductive. As one example, since both ESP and EEB offer upper division courses in ecology (ESP 100 and EEB 101, respectively), should faculty in CA&ES (other than ESP) urge their students to take the EEB course so as to preclude ESP from retaining high SCH and a high FTE target? Such approaches are demeaning to our intelligence and contrary to our mission, but they are a logical response to a RAC formula driven by SCH. This is in desperate need of reconsideration.

We ask that you submit your departmental responses by January 21, 2010 to Brenda Nakamoto (bvnakamoto@ucdavis.edu) and cc the Associate Deans, Mary Delany (medelany@ucdavis.edu)

and Jan Hopmans (jwhopmans@ucdavis.edu). If you have questions, please contact Mary Delany medelany@ucdavis.edu, 2-0233 or Jan Hopmans jwhopmans@ucdavis.edu, 2-8473, or members of the CPC:

Academic Planning Workgroup Agriculture/Food Systems/ Health/Communities (AFSHC)	**Academic Planning Workgroup Environment/Natural Resources/ Planning Design (ENRPD)**
Mary Delany, chair	Jan Hopmans, chair
Linda Bisson	Cort Anastasio
Rick Bostock	Chris Benner
Steve Boucher	Mary Cadenasso
Kent Bradford	Mike Denison
Carl Keen	Doug Larson
Ed Lewis	Sharon Lawler
Joy Mench	Frank Mitloehner
Lisa Miller	Jim Sanchirico
Toby O'Geen	Mark Schwartz
Raul Piedrahita	Dirk Van Vuren
Gang Sun	Stephen Wheeler
Neal Williams	
Glenn Young	

Appendix F - Graduate Group Survey

Graduate Group Information Request - January 25, 2010
College Planning Committee, Due Date: February 8, 2010

In addition to requesting information from departments, the CA&ES College Planning Committee (CPC) is seeking information from graduate groups, as CPC working groups develop recommendations regarding alternative organizational models for the CA&ES that:

1) Define the cutting-edge areas of scholarship of our College;
2) Maintain a world-class reputation of scholarship and leadership in these scholarship areas;
3) Consider impacts on departmental and inter-departmental undergraduate and graduate programs, as well as meeting the mission of Cooperative Extension;
4) To the fullest extent, take advantage of opportunities that may arise because of College reorganization, such as consideration of additional inter-departmental research centers that champion topical research areas across departments.

Since the CAES is planning for a *minimum* FTE reduction of 10% (or more likely 15-20%) within the next 5 years, the CPC is seeking input on the *highest* priority graduate education programs that you identify to be retained in the College and Campus. We hope the questions below will be helpful to engage graduate group faculty in discussions about priorities and opportunities that exist among departments and thus the College as a whole. In your response to the items below, we ask that you bear in mind *the realities of the budget crisis facing our college* to enable the future continuation or development of successful programs despite faculty attrition.

Please keep your responses brief (*bullet listings encouraged*) to allow for straightforward interpretation by the CPC. The same questions were part of a larger departmental survey that included questions on both undergraduate and teaching, research and outreach. Please return your responses to bvnakamoto@ucdavis.edu by February 8, 2010.

Examine the composition of your faculty in the graduate group in relation to graduate group course requirements. *We are asking for your input as to what is at risk and also what are the alternatives (other than new hires) from across the College (or entire campus).* Within that context:

E. Faculty reductions across departments will likely result in reduced faculty availability for graduate teaching. Please indicate teaching issues of concern for your graduate group that may arise from FTE attrition in the coming years.
F. List College (or campus) departments that currently do or could *possibly* assist in the delivery of courses for your graduate group. Can you envision future merging with other graduate groups, to maintain teaching of the graduate curriculum?
G. Are there additional opportunities between graduate groups or other interdisciplinary groups towards developing successful graduate training grants;
H. List other strategies that should be considered to deal with attrition and potential FTE reductions.
I. Please provide other relevant comments.

2009-10 Graduate Group Chair Support Groups Administered By CA&ES

CA&ES Admin Department	Grad Groups / Programs	2009-10 Group/ Program Chair	Avg 2006 - 2009 Enroll	Email Address
Animal Science	Animal Biology	Berger, Trish	45.0	tberger@ucdavis.edu
Animal Science	Avian Sciences	Eadie, John M.	12.7	jmeadie@ucdavis.edu
Env Design - Landscape Architecture	Geography	Benner, Chris	63.3	sbbrush@ucdavis.edu
Env Sci & Policy	Ecology	Lawler, Sharon	167.3	splawler@ucdavis.edu
Env Toxicology	Ag & Env Chemistry	Ebeler, Susan E.	43.3	seebeler@ucdavis.edu
Env Toxicology	Pharm Tox	Buckpitt, Alan	52.3	arbuckpitt@ucdavis.edu
Food Science	Food Science	Smith, Gary	40.7	gmsmith@ucdavis.edu
HCD-Community Dev	Community Development	Chris Benner	31.0	ccbenner@ucdavis.edu
HCD-Human Dev	Child Development	Harper, Lawrence	13.0	lharper@ucdavis.edu
HCD-Human Dev	Human Development	Harper, Lawrence	28.3	lharper@ucdavis.edu
LAWR	Atmospheric Sci	Weare, Bryan	26.7	bcweare@ucdavis.edu
LAWR	Hydrologic Sci	Fogg, Graham E.	20.3	gefogg@ucdavis.edu
LAWR	Soils and Biogeochemistry (formerly Soil Science)	Scow, Kate M.	28.0	kmscow@ucdavis.edu
Animal Science	Nutritional Biology	Calvert, Chris	97.7	cccalvert@ucdavis.edu
Plant Sciences	Horticulture & Agronomy	Walker, Andrew	49.0	awalker@ucdavis.edu
Plant Sciences	Int Ag Dev	Plant, Richard E.	29.0	replant@ucdavis.edu
Textiles & Clothing	Textiles	Sun, Gang	6.0	gysun@ucdavis.edu
Viticulture & Enol	Viticulture & Enology	Adams, Douglas	17.3	doadams@ucdavis.edu
		GROUP TOTALS	***770.9***	

Others outside CA&ES

Psychology: dllong@ucdavis.edu
Plant Biology: dpotter@ucdavis.edu
Biological Systems Engineering: bioageng@ucdavis.edu
Pharmacology and Toxicology: gjerwin@ucdavis.edu
Animal Biology: animalbiologygrad@ucdavis.edu
Population Biology: djbegun@ucdavis.edu

Agricultural and Environmental Chemistry Graduate Group

Appendix G

February 1, 2010

TO: College Planning Committee
FROM: Susan E. Ebeler, Professor Viticulture and Enology; Chair, Ag Chem Grad Group
RE: Graduate Group Information Request—Agricultural and Environmental Chemistry Graduate Group

Background: The Ag Chem Graduate Group is a multidisciplinary group comprised of faculty in CAES, L&S, DBS, College of Engineering, School of Veterinary Medicine, and School of Medicine. We are the oldest graduate group at UC Davis and have a strong and unique focus on applied chemistry within four areas of specialization including: analytical chemistry, environmental chemistry, biological & toxicological chemistry, and food, fiber & polymer chemistry.

To guide CPC discussions regarding graduate education in CAES, we have prepared responses to the following questions. These responses have been reviewed by the Grad Group's Executive Committee and Educational Policy Committee.

A. Faculty reductions across departments will likely result in reduced faculty availability for graduate teaching. Please indicate teaching issues of concern for your graduate group that may arise from FTE attrition in the coming years.

Response: Our courses are widely distributed among multiple departments within CAES as well as among different colleges campus-wide. Students are required to take two core courses; one of these is taught in the Department of Chemistry and one in the Department of Environmental Toxicology. The ETOX course is one of the only applied analytical chemistry classes campus-wide and reductions in faculty FTE to this course would severely impact our program. In addition to the core courses, students take courses in one of the four areas of specialization listed above. These courses are taught by faculty across the entire campus, therefore it is difficult to determine the full effect of CAES FTE reductions on these courses. One of the main impacts of reductions in CAES faculty FTE will be in the availability of research faculty mentors to guide graduate student research. We will be unable to admit and place students if significant reductions occur in faculty with applied chemistry interests relevant to our group.

B. List College (or campus) departments that currently do or could possibly assist in the delivery of courses for your graduate group. Can you envision future merging with other graduate groups to maintain teaching of the graduate curriculum?

Response: The Ag Chem graduate group itself does not offer any courses other than seminars and research units. All of our courses are taught by faculty throughout the campus (e.g., ETX, FST, LAWR, NUT, PLS, VEN, Textiles/Polymer Science/TXC, Chemistry, Chemical Engineering, DBS, Geology, Statistics, Veterinary Medicine, etc.).

While our areas of specialization overlap other programs in many areas including, for example, Atmospheric Sciences, Entomology, Food Science, Hydrologic Science, Pharmacology Toxicology, Soil Chemistry and Viticulture Enology, none of these programs have the substantial analytical chemistry focus that is the strength of the Ag Chem Group. While it would be possible to split the various sub-disciplines and areas of specialty within the group off to other programs, this would substantially dilute the chemistry focus, expertise, and training provided by the Ag Chem group.

C. Are there additional opportunities between graduate groups or other interdisciplinary groups toward developing successful training grants?

Response: Ag Chem students currently benefit from access to an NIEHS Training Grant in Environmental Toxicology administered through ETX. Ag Chem students have been eligible to receive funds through the Atmospheric Aerosols and Health (AAH) Training Grant; however, this program has now been cut. Nutrition has a USDA National Needs Fellowship but this does not currently support any AGC students; recent discussions with the Nutrition group indicate that a future proposal emphasizing the inter-linkages of chemistry and nutrition may be possible. Future training grants that have been proposed and are in various stages of submission or approval include an NSF IGERT on Green Textiles for Human and Environmental Health, a USDA National Needs Fellowship in FST, and a training grant in the Department of Chemistry (which may only be open to students in the Chemistry Graduate Group). The Graduate Group also benefits from two Endowments that support graduate student Fellowships, the Crosby Fellowship for students whose research focuses on Environmental Toxicology and the newly established Erika and Walter Jennings Fellowship.

D. List other strategies that should be considered to deal with attrition and potential FTE reductions.

Response: The Executive Committee and Advisors provided no suggestions. Graduate Groups currently have no control over faculty FTE; therefore it is already difficult for us to plan for FTE reductions and to ensure availability of courses for the degree.

E. Please provide other relevant comments.

Response: Graduate groups face many critical financial constraints that are separate from faculty FTE issues—including issues of administrative support and TA resources. A more global view to consider these constraints across the entire campus may be appropriate. Given the fact that Ag Chem, like most graduate groups, contains faculty from outside the college, it seems unlikely that CAES can make decisions regarding restructuring graduate groups in isolation from other campus units.

An external review committee rigorously reviews graduate groups approximately every 7 years. Any consolidation or reductions of graduate degree programs should be done in coordination with Grad Studies and these external reviews should be considered since

they take into account the quality of the program from a variety of perspectives and metrics.

Nakamoto, Brenda

From: Trish Berger [mailto:TBerger@UCDavis.Edu]
Sent: Monday, February 08, 2010 9:38 PM
To: Nakamoto, Brenda
Subject: RE: REMINDER - Graduate Group Information request, due today, Mon, 2/8/10

In addition to information previously provided,

the one disciplinary area that Animal Biology Graduate Group is unlikely to need reinforcement in the next 10 years is molecular genetics.

Trish Berger

From: Trish Berger [mailto:TBerger@UCDavis.Edu]
Sent: Tuesday, January 26, 2010 12:39 PM
To: Nakamoto, Brenda
Subject: RE: Graduate Group Information request

I will give some immediate responses and may respond further but don't want to delay for a more detailed answer and then forget.

Endocrinology both as didactic course(s) and research training are very clearly the biggest teaching issue. Obviously, with such a huge percentage of our faculty over 55, every area has concerns. Hence, reduced faculty availability for teaching in all areas is a concern.

We rely heavily on PLS 205 and 206 for our graduate students. At the M.S. level, one could see Avian Sciences merging with the Animal Biology M.S. but I do not see interest on their part.

From my writing of training grants, once one has a large enough student body, multiple graduate programs seem to be a complexity that is undesirable for a successful training grant.

I think that we will have fewer graduate students and some graduate programs may choose to terminate.

From: Nakamoto, Brenda [mailto:bvnakamoto@ucdavis.edu]
Sent: Monday, January 25, 2010 5:03 PM
To: seebeler@ucdavis.edu; Trish Berger; bcweare@ucdavis.edu; John M. Eadie; lharper@ucdavis.edu; ccbenner@ucdavis.edu; splawler@ucdavis.edu; Kimsey, Lynn; gmsmith@ucdavis.edu; ccbenner@ucdavis.edu; awalker@ucdavis.edu; lharper@ucdavis.edu; gefogg@ucdavis.edu; Plant, Richard; Christopher C. Calvert; arbuckpitt@ucdavis.edu; trgordon@ucdavis.edu; Scow, Kate; gysun@ucdavis.edu; doadams@ucdavis.edu; dllong@ucdavis.edu; dpotter@ucdavis.edu; skupadhyaya@ucdavis.edu; djbegun@ucdavis.edu
Cc: pbroyale@ucdavis.edu; Alisha L. Nork; mmpotters@ucdavis.edu; Alisha L. Nork; effie@ucdavis.edu; chuff@ucdavis.edu; schillyer@ucdavis.edu; Nickles, Carol; kjhunter@ucdavis.edu; caruport@ucdavis.edu; lfbrown@ucdavis.edu; gjerwin@ucdavis.edu; mmpotters@ucdavis.edu; Maricich, Donna; ggnbasst@ucdavis.edu; gjerwin@ucdavis.edu; emjeffery@ucdavis.edu; mmpotters@ucdavis.edu; lpstabley@ucdavis.edu; bdevine@ucdavis.edu; davis.edu; trhollowell@ucdavis.edu; laempie@ucdavis.edu; gjerwin@ucdavis.edu; @ucdavis.edu; Hopmans, Jan; Mary E. Delany
duate Group Information request

e Group chairs,

I am sending the attached memo on behalf of the CA&ES College Planning Committee, chaired by associate deans Mary Delany and Jan Hopmans. The committee is requesting your assistance with gathering information from graduate groups that may help with recommendations for alternative organizational models for the CA&ES. Please read the memo and respond. You comments are appreciated.

Brenda Nakamoto

Brenda Nakamoto
Administrative Assistant
College of Agricultural and Environmental Sciences Dean's Office
University of California
Davis, CA 95616
(530) 752-1606 office, (530) 752-9049 fax

Atmospheric Science Graduate Group

Graduate Group Information Request - January 25, 2010
College Planning Committee
Due Date: February 8, 2010

Please return your responses to bvnakamoto@ucdavis.edu by February 8, 2010.

Atmospheric Science Graduate Group, Bryan C. Weare, Chair

Examine the composition of your faculty in the graduate group in relation to graduate group course requirements. *We are asking for your input as to what is at risk and also what are the alternatives (other than new hires) from across the College (or entire campus).* Within that context:

A. Faculty reductions across departments will likely result in reduced faculty availability for graduate teaching. Please indicate teaching issues of concern for your graduate group that may arise from FTE attrition in the coming years.

Anticipated retirements in the next two years of our two primary experts in global climate change; this will impact our delivery of courses in this area, making it more difficult for our students to get the required number of upper division and graduate courses

Lack of expertise in global modeling and modeling the interactions between regional scales and hydrology, soils and biology.

B. List College (or campus) departments that currently do or could *possibly* assist in the delivery of courses for your graduate group. Can you envision future merging with other graduate groups, to maintain teaching of the graduate curriculum?

Currently assisting: Civil and Environmental Engineering

Could assist: possibly Physics, Chemistry and Geology

Merging would not be useful, since we are already a very broad group and since atmospheric science is a well defined discipline internationally

C. Are there additional opportunities between graduate groups or other interdisciplinary groups towards developing successful graduate training grants;

We are examining funding possibilities to continue the multidisciplinary training grant on air pollution and its health effects (aah.ucdavis.edu). We will continue to collaborate on the submission of IGERT proposals.

D. List other strategies that should be considered to deal with attrition and potential FTE reductions.

Narrowing the scope of graduate education and research.

E. Please provide other relevant comments.

Reductions in TA support will adversely affect graduate group student support.

Graduate Group Information Request - January 25, 2010
College Planning Committee

Response from the Avian Sciences Graduate Group

A. Faculty reductions across departments will likely result in reduced faculty availability for graduate teaching. Please indicate teaching issues of concern for your graduate group that may arise from FTE attrition in the coming years.

- We are a small graduate group (M.S. only) with a supporting faculty of 16 professors. Hence, significant loss of faculty (via retirement) could be problematic without new recruitment.
- Avian expertise on campus has diminished in recent years with retirements and movements of faculty off-campus (Mike Fry, Ralph Ernst, Dan Anderson, Francine Bradley, Pat Wakenell, Carol Cardona).
- However, the campus has added several new faculty with avian expertise and some of these have joined the ASGG (e.g., Tom Coombs-Hahn, Holly Ernest, Lisa Tell) or we are hoping to recruit them (Gabrielle Nevitt, Gail Patricelli, John Wingfield, Marilyn Ramenofsky).
- The most pressing concern for the Graduate Group in the near future would be retirements of key members such as Jim Millam who teaches one of the core courses (NPB 217) and has played a central role in the group guidance and leadership, and the possibly the reduced availability of Dean Mary Delany due to her other pressing time commitments in the Dean's Office.
- The loss of several faculty members with an avian emphasis from the UCD School of Veterinarian Medicine (Carol Cardona, Pat Wakenell) is also worrisome, leading to a reduction in the breadth of our program. The future direction and intent of the SVM to continue an emphasis in avian veterinary medicine is unclear and one in which we have little input.
- With the retirement of Ralph Ernst and the move off-campus of Francine Bradley our strength in poultry science and management has been diminished (although Joy Mench and Annie King continue strong programs in this area)

B. List College (or campus) departments that currently do or could *possibly* assist in the delivery of courses for your graduate group. Can you envision future merging with other graduate groups, to maintain teaching of the graduate curriculum?

- Our graduate Group, by design, is interdisciplinary. Hence, we have contributions from faculty in 4 departments of the College of Agriculture and Environmental Sciences (Animal Science; Entomology; Neurobiology, Physiology and Behavior; and Wildlife, Fish and Conservation Biology) and 2 within the School of Veterinary Medicine (Medicine and Epidemiology; Population, Health and Reproduction). Students in our graduate group can, and do, take courses in AVS, PHR, NPB, WFC.
- We anticipate continued involvement in the future from all of these departments, with the caveat raised above concerning replacements of avian specialist in the SVM.
- Our faculty also belong to a number of other graduate groups (Animal Biology, Animal Behavior, Comparative Pathology, Ecology, Food Science, Genetics, Immunology, Molecular, Cellular & Integrative Physiology, Microbiology,

Nutrition, and Pharmacology & Toxicology) providing further interaction and inter-group assistance in course delivery. Graduate courses in these groups are used to provide elective and required coursework for our students.

- Mergers with other graduate groups would tend to diminish the inter-disciplinary nature of our group and would thereby cause us to limit the focus to a particular field (e.g. ecology, animal science/biology, genetics). Compared to other programs throughout North America, ours is unique in the blending of faculty and students interested in agricultural, medical, and environmental questions. All other programs focus on only one of these areas. In contrast, we strongly emphasize the fundamental disciplines of genetics, cell biology, physiology, behavior, medicine and environmental biology as they relate to birds in general.
- Administrative mergers are more feasible (e.g. Animal Biology, Ecology) and indeed, we have already done so to some extent by developing a structure to share our Graduate Program Assistant with the Animal Science Program. We are exploring other possible administrative clusters.

C. Are there additional opportunities between graduate groups or other interdisciplinary groups towards developing successful graduate training grants.

- Yes, although these will tend to be more discipline oriented. For example, an increased interest in the group (and recruitment of new faculty) working with wild birds provides an opportunity to collaborate with the Ecology and Animal Behavior Graduate groups and the John Muir Institute of the Environment to develop joint training programs in Conservation Biology.
- Likewise, the development of the Animal Biology Graduate program offers potential for joint training programs/grants in areas of nutrition, animal welfare, physiology and genetics. We have not explored these in any detail, but are willing to.

D. List other strategies that should be considered to deal with attrition and potential FTE reductions.

- Our major focus will be to actively recruit engagement by other faculty on campus with an avian interest (we have identified several).
- Clustering of Graduate groups with similar interests/structures could help with administrative overload and allow further sharing of administrative support.
- Recruitment of on-campus, PhD professional researchers could be facilitated. For example, there are researchers with an interest in sponsoring students (and providing support) in the USGS Western Ecological Research Center, Davis Field Station, and the Oiled Wildlife Care Network, Wildlife Health Center, School of Veterinary Medicine. This would require MOUs or similar agreements with respect to teaching & mentoring requirements, but offers a further mechanism to broaden the scope and involvement of our group and provide additional funding and educational opportunities for our students.

E. Please provide other relevant comments

- Over a longer time horizon (next decade), there will be several retirements within our group. This would significantly reduce avian expertise on campus. Without at least some backfill, this will not only affect our ability to provide training and

mentoring within the ASGG, but would seriously impact UCD's ability to maintain a balanced and strong program in vertebrate biology and biodiversity.

Community Development Graduate Group

Graduate Group Information Request - January 25, 2010
College Planning Committee
Due Date: February 8, 2010

Community Development Graduate Group (CDGG)

A. *Faculty reductions across departments will likely result in reduced faculty availability for graduate teaching. Please indicate teaching issues of concern for your graduate group that may arise from FTE attrition in the coming years.*

- The most critical teaching gap at the moment is in the area of community-development related research methods. At the moment, we have no core methods course that we offer—students take methods courses from a variety of other programs and departments. This is manageable, but far from ideal.
- With Miriam Wells' retirement and Michael Peter Smith's upcoming retirement, we face major gaps in courses that focus on the analysis of social inequality, particularly as it relates to work, labor, and urban development.
- We lack sufficient courses in gender and community development.

B. List College (or campus) departments that currently do or could *possibly* assist in the delivery of courses for your graduate group. Can you envision future merging with other graduate groups, to maintain teaching of the graduate curriculum?

- LDA and Community Development are the two units that provide the core teaching in the CDGG. Our current departmental restructuring discussions about bringing together LDA, CD and HD should help to strengthen this collaboration and the coordination of our core curriculum.
- The Geography Graduate Group is developing two new methods courses: one in Computational Methods in Geography, and the other in Methods of Socio-Spatial Analysis in Geography. These courses will help to fill some of the gap in methods courses for the CDGG.

C. *Are there additional opportunities between graduate groups or other interdisciplinary groups towards developing successful graduate training grants;*

- We are in the process of working with UC Davis Extension (UCDE) to develop a part-time, self-sustaining Master's Degree Program in Sustainable Community Development. Courses in this program will be taught primarily in evenings, weekends, and intensive short-courses, to enable working professionals to work towards a degree part-time. The program is envisioned as building in part on existing core strengths on campus in the CDGG program and LDA department, as well as existing UCDE courses in the Green Building and Sustainable Design, Land Use and Environmental Planning, and Conflict Resolution programs. We expect to develop at least one or two new core courses in Sustainable Community Development, taught by ladder-rank Faculty, and a series of professional skills courses taught by adjunct faculty and working professionals. We expect the program will be able to attract Community Development students who may not be able to go to school full-time, while also providing

opportunities for our full-time students to take some additional courses through UCDE. A full proposal for this program will be developed by the end of Spring 2010, to be submitted to Graduate Council for review.

D. List other strategies that should be considered to deal with attrition and potential FTE reductions.

- It is important to recognize that the best structure for managing undergraduate education may be very different from the best structure for managing graduate education, or research or service. Cluster hires, like those related to the Agricultural Sustainability Institute and the Center for Regional Change, provide a great vehicle for facilitating cross-departmental collaboration, facilitating cutting-edge research, and promoting graduate student recruitment and education. We might consider requiring that all retirement replacements only be made in clusters in which more than one department agrees on related priority areas.

E. Please provide other relevant comments.

Ecology Graduate Group

Responses to CPC questionnaire: Ecology Graduate Group

A. Faculty reductions across departments will likely result in reduced faculty availability for graduate teaching. Please indicate teaching issues of concern for your graduate group that may arise from FTE attrition in the coming years.

Ecology is a very large and top-ranked graduate group, and we enjoy enthusiastic faculty participation in teaching. Our core courses are not endangered and we can continue to offer a variety of excellent specialized courses as well.

Part of what makes the group strong is its interdisciplinary nature. However, teaching is not always spread across departments in proportion to where our students are housed, and there is some concern that this could become further unbalanced if faculty attrition causes affected departments to cut back on graduate teaching in order to maintain undergraduate courses.

B. List College (or campus) departments that currently do or could *possibly* assist in the delivery of courses for your graduate group. Can you envision future merging with other graduate groups, to maintain teaching of the graduate curriculum?

Faculty from about 25 departments help to deliver our courses, so I will not list these here. In our case, mergers are not needed nor are they desirable because of our size, which is currently about 125 faculty and 200 students.

Our staff support consists of a full-time Student Affairs Officer who has no other departmental duties. Having a Student Affairs Officer dedicated to this single program has worked out well for us and we plan to continue with this structure. Environmental Science and Policy has been invaluable in providing additional administrative support (e.g, IT support; help from the MSO and undergraduate Student Affairs Officer) and we hope that this relationship will continue.

C. Are there additional opportunities between graduate groups or other interdisciplinary groups towards developing successful graduate training grants;

Certainly! Our faculty have been involved with NSF IGERT grants (e.g. the current REACH IGERT website http://reach.ucdavis.edu/people/trainers.html) and we always welcome collaboration on funding opportunities. Our former Chair Mark Schwartz is heading up an interdisciplinary Conservation Management training grant from the Packard Foundation, which has enabled us to augment our training of International students as well as US citizens who want to join agencies or non-profits after they complete degrees.

D. List other strategies that should be considered to deal with attrition and potential FTE reductions.

N/A

E. **Please provide other relevant comments.**

Graduate Group Information Request - January 25, 2010
College Planning Committee
Due Date: February 8, 2010

In addition to requesting information from departments, the CA&ES College Planning Committee (CPC) is seeking information from graduate groups, as CPC working groups develop recommendations regarding alternative organizational models for the CA&ES that:

1) Define the cutting-edge areas of scholarship of our College;
2) Maintain a world-class reputation of scholarship and leadership in these scholarship areas;
3) Consider impacts on departmental and inter-departmental undergraduate and graduate programs, as well as meeting the mission of Cooperative Extension;
4) To the fullest extent, take advantage of opportunities that may arise because of College reorganization, such as consideration of additional inter-departmental research centers that champion topical research areas across departments.

Since the CAES is planning for a *minimum* FTE reduction of 10% (or more likely 15-20%) within the next 5 years, the CPC is seeking input on the *highest* priority graduate education programs that you identify to be retained in the College and Campus. We hope the questions below will be helpful to engage graduate group faculty in discussions about priorities and opportunities that exist among departments and thus the College as a whole. In your response to the items below, we ask that you bear in mind *the realities of the budget crisis facing our college* to enable the future continuation or development of successful programs despite faculty attrition.

Please keep your responses brief (*bullet listings encouraged*) to allow for straightforward interpretation by the CPC. The same questions were part of a larger departmental survey that included questions on both undergraduate and teaching, research and outreach. Please return your responses to bvnakamoto@ucdavis.edu by February 8, 2010.

Examine the composition of your faculty in the graduate group in relation to graduate group course requirements. *We are asking for your input as to what is at risk and also what are the alternatives (other than new hires) from across the College (or entire campus).* Within that context:

A. Faculty reductions across departments will likely result in reduced faculty availability for graduate teaching. Please indicate teaching issues of concern for your graduate group that may arise from FTE attrition in the coming years.

- **A major concern is the loss of specialists in the areas of insect physiology & molecular biology, pest management, honeybees/pollination biology and insect systematics.**

- **These area areas represented nowhere else on campus. Other more generalized areas of importance, such as ecology, molecular genetics and toxicology are well represented elsewhere.**

B. List College (or campus) departments that currently do or could *possibly* assist in the delivery of courses for your graduate group. Can you envision future merging with other graduate groups, to maintain teaching of the graduate curriculum?

- **Entomology covers a very wide array of fields. Our grad students take courses in EVE, ETOX, WFCB, CHEM and MCB among others, depending on their area of emphasis.**

- **Entomology is the ultimate cross disciplinary field.**

C. Are there additional opportunities between graduate groups or other interdisciplinary groups towards developing successful graduate training grants;

Probably but this is best left to the faculty.

D. List other strategies that should be considered to deal with attrition and potential FTE reductions.

Greater support from the Dean's office for graduate student support – fund-raising for scholarships or TA support.

E. Please provide other relevant comments.

Graduate education on campus is problematic today. The cost of having and supporting a student is prohibitive. Many faculty members are moving away from taking graduate students since for the same cost they can hire a full-time postdoct to work on their project and get publications. It is now largely an act of altruism to take on a graduate student.

Food Science Graduate Group

DAVIS: DEPARTMENT OF FOOD SCIENCE AND TECHNOLOGY

February 8, 2010

To: CA&ES College Planning Committee

From: Gary M. Smith, Chair
Graduate Group in Food Science
Department of Food Science & Technology
UCD NMR Facility

Re: Response to 25 January Request for information

Food Science is not a discipline, but a multidisciplinary research area. The graduate group is a collection of scientists in many disciplines who have research focuses that are relevant to some aspect of food, usually between the moment the food is harvested and the instant the food is swallowed. Production departments deal with what happens before harvest and Nutrition deals with what becomes of food inside the body. We are between those limits, although our work certainly bears on nutrition. So, the focus of Food Science is food. The difficulty with enlisting aid from discipline-oriented programs (e.g., Chemistry or Biochemistry/Molecular Biology) is that their expertise is in the discipline, not in food. Those faculty in other programs who deal with food are very likely members of the graduate group.

The graduate curriculum consists of core courses offered almost exclusively by the Department of Food Science and Technology, some electives that are taught largely by Food Science and Technology faculty, and a collection of electives that are generally outside of the group e.g., Chemistry, Genetics, Microbiology).

With these issues in mind, I have compiled the following list of classes. Please keep in mind that other departments could teach these courses *only* if they develop an understanding of food as such, and not purely as a chemical/biochemical/microbiological system.

Graduate courses by area Core Courses in **Bold**	Departments that could *potentially* offer assistance
Food Chemistry and Properties FST **201**, 202, 210 (not currently taught), 211	Nutrition, Environmental Toxicology, Animal Sciences, Plant Sciences
Food Microbiology FST **204**, 205 (not currently taught)	Microbiology
Food Processing FST **203**	Biological and Agricultural Engineering, Chemical Engineering
Sensory analysis FST 207, 227	Psychology, Physiology, NPB
Seminar FST **291**	Any of the above

Graduate Group Information Request - January 25, 2010
College Planning Committee
Due Date: February 8, 2010

Geography Graduate Group

A. *Faculty reductions across departments will likely result in reduced faculty availability for graduate teaching. Please indicate teaching issues of concern for your graduate group that may arise from FTE attrition in the coming years.*

- We are in the process of appealing Graduate Council's decision to discontinue the Geography Graduate Group. As part of that appeal, we have redesigned the core curriculum around 4 core courses, 2 of which (GEG 200CN and 200DN) are entirely new courses.

  GEO 200AN – Geographical Concepts (4 unit, fall quarter) (Fisk, WFCB)
  GEO 200BN – Theory and Practice of Geography (4 units, winter quarter) (Galt, LDA/HCD)
  GEO 200CN – Computational Methods in Geography (4 units) (Hijmans-ESP)
  GEO 200DN – Methods of Socio-Spatial Analysis in Geography (4 units) (Rios, LDA/HCD)

- GEO 200AN is currently taught by Debbie Elliott-Fisk in WFCB, and when she retires, we will face an urgent need for Geographical Concepts core course. This will be an urgent need.

- Other areas are somewhat less urgent, since we have some flexibility in course requirements. However, current and pending retirements in the Community Development and Landscape Architecture departments will reduce our course offerings in urban and regional development, particularly as it relates to social equity.

- GIS and geo-computational analysis remain critically needed teaching areas, with somewhat less than full complements of available courses.

B. *List College (or campus) departments that currently do or could possibly assist in the delivery of courses for your graduate group. Can you envision future merging with other graduate groups, to maintain teaching of the graduate curriculum?*

- The four departments that have committed to teaching CORE courses in Geography are: ESP, WFCB, LDA & HCD-CD. Other departments with strong Geography connections include LAWR, Civil & Environmental Engineering, Women & Gender Studies, and Plant Sciences.

- GGG already has a close relationship with the Community Development Graduate Group, but CDGG only provides a Masters Degree.

- 20 out of 71 Faculty members of the Geography Graduate Group are also members of the Ecology Graduate Group, but the overlap only lies in the area of physical geography and to a small extent human-environment interactions, not human geography, and there are significant disciplinary differences.

- Many of our students work with the Transportation, Technology and Policy (TTP) program, though Geographers focus on spatial and mobility questions related to transportation, while TTP students focus on technology or planning and policy.

C. *Are there additional opportunities between graduate groups or other interdisciplinary groups towards developing successful graduate training grants;*

- As part of the departmental restructuring process, we are in the process of discussing synergies in Graduate education between CD, LDA and HD. Community Development offers a MS degree, and LDA has plans for developing a Master's in Landscape Architecture. Human Development offers a Master's Degree in Child Development, and a Ph.D. in Human Development. There are strong opportunities for programmatic links between the Master's Programs and Ph.D. programs, and opportunities for strengthening administrative structures by greater collaboration between the programs.

D. List other strategies that should be considered to deal with attrition and potential FTE reductions.

- Since graduate groups don't hire faculty, our major challenge is ensuring that geography and geographical perspective remain a high priority in any retirements placements and new hires that may occur in the coming years. This requires close collaboration with the key departments with strong GGG faculty members. This falls into that category of issues that should be a priority for the College, but is not necessarily a high priority for any individual department.

E. Please provide other relevant comments.

We expect our appeal of Graduate Council's decision to discontinue the GGG to be decided upon by the end of the Spring 2010 quarter. We are quite hopeful, given Dean Van Alfen's strong support and the leadership of a cohort of relatively new Geography Faculty on campus, but at the moment the future is uncertain. If the appeal is successful, we will need to ensure Geography has a higher visibility on campus, to help with our recruitment of students and pursuit of external grant opportunities.

Horticulture and Agronomy Graduate Group
M. Andrew Walker, Chair

A. Faculty reductions across departments will likely result in reduced faculty availability for graduate teaching. Please indicate teaching issues of concern for your graduate group that may arise from FTE attrition in the coming years.

Our grad group is focused on training students in the Plant Sciences, and its many guises, in the context of solving agricultural problems. We expect our graduates to have a strong understanding of how to grow the crop species they work on. As the faculty teaching the crop production courses retire, these courses will likely not be continued.

UC Davis is still unique in the breadth of its course offerings in Horticulture and Agronomy. As this breadth is reduced through retirements the GGHA will not be as attractive to students interested in the plant sciences.

The expertise to teach these courses is not found beyond our graduate group.

B. List College (or campus) departments that currently do or could *possibly* assist in the delivery of courses for your graduate group. Can you envision future merging with other graduate groups, to maintain teaching of the graduate curriculum?

The dominant Department in the Horticulture and Agronomy Graduate Group is Plant Sciences. This Department was recently formed by the merger of Agronomy, Environmental Horticulture, Pomology and Veg Crops. We also have members from Viticulture and Enology, Plant Pathology, Entomology, Land Air and Water Resources, and Environmental Design. The expertise to teach our crop specific breadth courses and train graduate students does not exist outside our Graduate Group.

C. Are there additional opportunities between graduate groups or other interdisciplinary groups towards developing successful graduate training grants;

There may be USDA related opportunities to train students interested in agricultural research but we have not pursued them to date.

It might be possible to team with Plant Biology or other graduate groups to pursue training grants in areas of applied agricultural research.

D. List other strategies that should be considered to deal with attrition and potential FTE reductions.

Our group will have to work closely with Plant Sciences to prioritize and maintain key courses.

Part of this process may involve cross-training of instructors in crop production courses.

It will be necessary to encourage the rehiring of faculty teaching key courses. These faculty could also share teaching loads and train remaining faculty.

Focus on key Departments and Graduate Groups and their ability to teach key courses when positions become available.

Hydrologic Sciences Graduate Group Response to
College Planning Committee Survey
February 8, 2010

Examine the composition of your faculty in the graduate group in relation to graduate group course requirements.

A. Faculty reductions across departments will likely result in reduced faculty availability for graduate t eaching. Please i ndicate teaching issues of concern for your g raduate group that may arise from FTE attrition in the coming years.

- Water resources m odeling: The re cent retirement o f Dr. Miguel Mariño creates a difficult gap in this area. This particular gap i s most limiting because of the need for integrated water resources modeling expertis e in development of new researc h funding on climate change and water resources. Accordingly, LAWR has as one of its priority positions a basin -scale hydrologic modeler. The groundwater teaching that was done b y Mariño has been taken over by Fogg.
- Irrigation science & engineering: The recent retir ement of Dr. David Goldhamer and pending retirements of Drs. Terry Pritchard, Blain Hansen and Larry Schwankl in the next 2 -3 years severely weakens the irrigation science and engineering program. Given that irrigation uses most of CA's water resources, HSGG believes new investment is needed in this area. The Robert Hagan Chair in water resources, currently under recruitment, may help.
- Remote sensing: The retirement of Dr. Susan Ustin will create a huge gap in this area, which is broadly supportive of multiple graduate and undergraduate programs across campus. HSGG is strongly supportive of a new position in remote sensing, as put forth b y LAWR. This topic is key because modern hydrology is increasingly dependent on ongoing and future advances in remote sensing.
- Limnology: The pending retirement of Dr. Charles Goldman creates a significant gap in the area of biological limnology. HSGG would b e very supportive of a hire at the interface between biology an d hydrology.
- Plant, water, soi l relations: The recent retiremen t of Dr. Ted Hsiao and pending retirement of Dr . Wendy Silk repr esent the loss of this topical area from HSGG. We want to explore partnering with other plant science faculty on campus to compensate.

B. List College (or campus) departments that currently do or coul d ***possibly*** assist i n the delivery of courses for your graduate group. Can you envision future merging with other graduate groups, to maintain teaching of the graduate curriculum?

Currently the following departments contribute courses for HSGG:

- LAWR (mostly HYD courses, but also some SSC courses)
- Civil & Environmental Engineering
- Environmental Science and Policy
- Geology

The possibility of merging HSGG and the water resources graduate program in Civil & Environmental Engineering into one, graduate group is worth exploring. It would have to be a dual-degree track (engineering and non-engineering) and could be called Water Science and Engineering. This statement should not be construed to indicate that there is mutual buy-in to the idea among faculty of the two programs. Nevertheless, such a move could be transformative for a campus that for decades has been attempting to create a stronger, more unified graduate program in water. The merger would inherently lead to joint academic planning at the graduate level by the two strongest water programs on campus, but there are a number of hurdles to overcome.

C. Are there additional opportunities between graduate groups or other interdisciplinary groups towards developing successful graduate training grants;

Given the importance of water resources, there exist many and growing opportunities for development of graduate training grants, such as IGERTs, in collaboration with numerous other graduate groups, including Atmospheric Science, Soils and Biogeochemistry, Ecology, Agricultural & Environmental Chemistry, Resource Economics, Geology, Civil and Environmental Engineering, Computer Science, etc. In particular, the ongoing and future effects of climate change on water availability is creating opportunities for obtaining large grants as well as center funding. Examples include the recent NSF call for centers on decision making under uncertainty (UCD proposal awaiting decision), NSF call for research on climate change and water resources, and Department of Interior's effort to establish Climate Change Response Centers. The latter is being explored by leadership from JMIE as well as HSGG.

The climate change and water nexus, perhaps more than any other environmental topic today, offers great opportunities for development of major, extramural funding; and HSGG will, by necessity, be central to such efforts. However, for HSGG to lead and compete for new funding on climate change and water, it must partner with climate scientists, including modelers, who work at the regional and global scales. The campus lacks expertise in global and regional climate modeling. Accordingly, HSGG eagerly supports another priority position that has been put forth by LAWR in climate science processes.

Other potential opportunities for research grants or centers lie in the area of water quality (groundwater quality sustainability; TMDLs) and innovative subsurface storage of water to compensate for ongoing loss of snow storage.

D. List other strategies that should be considered to deal with attrition and potential FTE reductions.

- **The greater Sacramento area has relatively large numbers of Ph.D. hydrologic scientists working in research positions, state agencies, and private enterprise. Just as Stanford has benefited**

hugely from being near the Menlo Park U.S. Geological Survey office and UNR has benefited hugely from having Desert Research Institute nearby, UCD and HSGG could benefit by making it easier for off-campus scientists to teach, mentor and fund our graduate students. For example, there are many, well-respected hydrologic scientists at the U.S.G.S. in Sacramento, some of whom are very interested in teaching as well as mentoring and funding of UCD HSGG students. Unfortunately, this campus seems to make it difficult to adopt such individuals part of the campus community via adjunct, lecturer or research series appointments. A HSGG academic federation faculty member states: "Another question CAES might like to ask is what the effect of an unwritten "practice" of various campus departments stemming from the Vice Provost's office interpretation (or misinterpretation) of the APM -- in essence requiring soft money faculty, or Research Scientists, to maintain funding without gaps in order to keep their appointments. With California's current fiscal crisis putting projects on and off hold and imposing arbitrary end dates, I imagine various graduate groups may quickly lose some positions."

- **A strategy that would dovetail with the above bullet: release more funds for lecturer and TA positions as faculty attritions occurs.**

E. Please provide other relevant comments.

The CAES Academic Plan and the 2009 APC report both emphasize the importance of water and watersheds for the future of society and CAES. This prioritization makes great sense, but if CAES is to honor it, some additional investment must occur into water faculty positions. Fortunately, the campus is already sufficiently strong in water that the needed level of investment to provide a disproportionate boost in program quality and extramural funding is relatively modest, even when some attrition is factored in.

The topic hydrologic sciences, whether at UCD or other campuses, will remain inherently a graduate program, although the current growth in the Hydrology B.S. program is valuable and should be nurtured. CAES has historically judged program strength mainly at the departmental level and mainly in terms of student credit hours, which is of course weighted toward undergraduate education. For programs like HSGG that do not have complementary, large-enrollment undergraduate classes, this system is hurtful because it does not recognize HSGG's important role in carrying out critical college, campus, CA and international missions in water and watersheds. The big water problems are being addressed by HSGG faculty and their graduate students, not by accumulated student credit hours in undergraduate classes. The legislators and taxpayers of CA value ***both*** our work on the big water problems ***and*** our education of undergraduates, and I do not believe they would willing give up the former because of modest student numbers in the latter. By the same token, HSGG faculty will continue to play key roles in undergraduate education related to water and earth systems.

International Agricultural Development Graduate Group

Response to CPC Graduate Group Information Request
Richard Plant, Chair, IAD Graduate Group

A. Faculty reductions across departments will likely result in reduced faculty availability for graduate teaching. Please indicate teaching issues of concern for your graduate group that may arise from FTE attrition in the coming years.

- Of primary concern is the fact that when an individual faculty member who has a personal commitment to a course retires, there is often nobody willing to step in and take over that course.
- Department chairs place primary importance on the needs of their own department and often little or no interest in the needs of graduate groups.
- Our particular graduate group makes extensive use of non-senate faculty to teach certain core courses due to the lack of qualified senate faculty. These positions must be funded each year.
- Several departments made agreements to teach certain of our core courses, but have reneged on these agreements as a result of budget cuts.

B. List College (or campus) departments that currently do or could *possibly* assist in the delivery of courses for your graduate group. Can you envision future merging with other graduate groups, to maintain teaching of the graduate curriculum?

- Our courses are currently taught by members of Plant Sciences, Agricultural and Resource Economics, and the International Programs Office. We are very interdisciplinary, with major components from community development, agricultural economics, and plant sciences, so it is hard to see how this interdisciplinary character could continue if we merged with a disciplinary graduate group.

C. Are there additional opportunities between graduate groups or other interdisciplinary groups towards developing successful graduate training grants

- As a Masters only program it is hard to see how we could do much in the way of training grants. One possible collaboration would be between IAD and Community Development.
- The more feasible strategy is a grant discussed in response to the next question.

D. List other strategies that should be considered to deal with attrition and potential FTE reductions

- We have applied for an obtained funding from the John D. and Katherine T. MacArthur Foundation to become part of their global Masters in Development Practice program. We are working closely with the Program for International Energy Technologies on this project and hope to leverage this into increased funding.

- We are working with the Student Farm to develop a fee-based program that will provide agricultural short courses for development staff from developing countries.

E. Please provide other relevant comments.

- Only the obvious one that the graduate group model does not function particularly well in bad economic times as long as graduate groups are assigned the status of charitable organizations.
- One obvious solution is to take some of the instructional budget and assign it to Graduate Group Chairs to permit them to compensate departments for providing teaching services.

Graduate Group Information Request - January 25, 2010
College Planning Committee
Due Date: February 8, 2010

In addition to requesting information from departments, the CA&ES College Planning Committee (CPC) is seeking information from graduate groups, as CPC working groups develop recommendations regarding alternative organizational models for the CA&ES that:

1) Define the cutting-edge areas of scholarship of our College;
2) Maintain a world-class reputation of scholarship and leadership in these scholarship areas;
3) Consider impacts on departmental and inter-departmental undergraduate and graduate programs, as well as meeting the mission of Cooperative Extension;
4) To the fullest extent, take advantage of opportunities that may arise because of College reorganization, such as consideration of additional inter-departmental research centers that champion topical research areas across departments.

Since the CAES is planning for a *minimum* FTE reduction of 10% (or more likely 15-20%) within the next 5 years, the CPC is seeking input on the *highest* priority graduate education programs that you identify to be retained in the College and Campus. We hope the questions below will be helpful to engage graduate group faculty in discussions about priorities and opportunities that exist among departments and thus the College as a whole. In your response to the items below, we ask that you bear in mind *the realities of the budget crisis facing our college* to enable the future continuation or development of successful programs despite faculty attrition.

Please keep your responses brief (*bullet listings encouraged*) to allow for straightforward interpretation by the CPC. The same questions were part of a larger departmental survey that included questions on both undergraduate and teaching, research and outreach. Please return your responses to bvnakamoto@ucdavis.edu by February 8, 2010.

Examine the composition of your faculty in the graduate group in relation to graduate group course requirements. *We are asking for your input as to what is at risk and also what are the alternatives (other than new hires) from across the College (or entire campus).* Within that context:

A. Faculty reductions across departments will likely result in reduced faculty availability for graduate teaching. Please indicate teaching issues of concern for your graduate group that may arise from FTE attrition in the coming years.

The Microbiology Graduate Group (MGG) has 72 faculty and ~60 graduate students. MGG is composed of people from CA&ES, CoB, CoE, Med and Vet. Med. The research breath of the group reflects the diversity of its membership ranging from applied agricultural issues to fundamental mechanisms of human disease. This graduate group includes many of the most successful faculty in terms of obtaining extramural funding.

The core curriculum of MGG is currently going through an administrative transition away from the Department of Microbiology, CoB to the graduate group. This change is occurring due to loss of FTE investment by CoB in new professors able to teach these courses. Therefore, the campus community is volunteering to help. If faculty efforts falls due to other demands, then the MGG will suffer.

There are four core courses that are now dependent upon faculty volunteering to teach, rather than teaching assigned to faculty of a department.

Any reduction in FTE by CA&ES will impact the pool of faculty who could "volunteer" time to teach within the MGG core. A reduction in FTE by CA&ES will present a challenge to graduate teaching if the faculty must teach more undergraduate courses or become more insulated by the college framework.

New Idea:
Reward faculty for graduate group teaching regardless of where the program is housed. Ultimately, success of the programs brings students into CA&ES laboratory/departments through employment and increase research productivity.

Promote combining core courses with other graduate group through incentives. Currently, many programs view their curriculum as specialized. However, most biologists and biochemists utilize many of the same scientific approaches.

B. List College (or campus) departments that currently do or could *possibly* assist in the delivery of courses for your graduate group. Can you envision future merging with other graduate groups, to maintain teaching of the graduate curriculum?

AS, FST, LARW, V&E, PS, PP, ENT, BAE, NUT

Possible: ETOX

C. Are there additional opportunities between graduate groups or other interdisciplinary groups towards developing successful graduate training grants;

MGG already has close ties with the NIH training (Animals Models of Infectious Disease). This has an executive committee with members from CA&ES, Vet Med and Med. However, this training grant is open to any UCD student.

Students supported come from faculty laboratories in CA&ES, CoE, CoB, Vet. Med. and Med representing numerous graduate groups.

There is high motivation among faculty to seek new training grants that crosses graduate groups, departments and colleges. The limitation is adequate matching funds (often a requirement by USDA, NSF and NIH) and grants specialist administrative support.

D. List other strategies that should be considered to deal with attrition and potential FTE reductions.

Faculty are A reduction in FTE will affect the delivery undergrad courses, which will in turn affect graduate courses. Encourage different CA&ES programs/majors to combined courses in ways that streamline efforts. This might cause a reduction in specialization but will preserve resources and time for faculty to contribute to graduate course (and research programs).

E. Please provide other relevant comments.

Regardless of the graduate group, the reduction in TA support is already having a severe impact in programs. With the projected further reduction this will weaken all graduate groups. Faculty grants and training grants are no longer able to makeup for the continual erosion of college and campus resources. Requesting more grants is only possible if faculty are able to dedicate the time to writing and have regular access to grant specialists who can compile budgets and complete the necessary supporting documentation/paperwork.

Nutritional Biology Graduate Group

Graduate Group Information Request - January 25, 2010
College Planning Committee
Due Date: February 8, 2010

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1) Define the cutting-edge areas of scholarship of our College;
2) Maintain a world-class reputation of scholarship and leadership in these scholarship areas;
3) Consider impacts on departmental and inter-departmental undergraduate and graduate programs, as well as meeting the mission of Cooperative Extension;
4) To the fullest extent, take advantage of opportunities that may arise because of College reorganization, such as consideration of additional inter-departmental research centers that champion topical research areas across departments.

Since the CAES is planning for a *minimum* FTE reduction of 10% (or more likely 15-20%) within the next 5 years, the CPC is seeking input on the *highest* priority graduate education programs that you identify to be retained in the College and Campus. We hope the questions below will be helpful to engage graduate group faculty in discussions about priorities and opportunities that exist among departments and thus the College as a whole. In your response to the items below, we ask that you bear in mind *the realities of the budget crisis facing our college* to enable the future continuation or development of successful programs despite faculty attrition.

Please keep your responses brief (*bullet listings encouraged*) to allow for straightforward interpretation by the CPC. The same questions were part of a larger departmental survey that included questions on both undergraduate and teaching, research and outreach. Please return your responses to bvnakamoto@ucdavis.edu by February 8, 2010.

Examine the composition of your faculty in the graduate group in relation to graduate group course requirements. *We are asking for your input as to what is at risk and also what are the alternatives (other than new hires) from across the College (or entire campus).* Within that context:

A. Faculty reductions across departments will likely result in reduced faculty availability for graduate teaching. Please indicate teaching issues of concern for your graduate group that may arise from FTE attrition in the coming years. The GGNB has recently re-designed the core curriculum. As a result the courses are multidisciplinary in nature, and include a faculty member as instructor in charge with a variety of faculty that provide lectures in their areas of expertise. Given the vast and diverse membership in the GGNB, we do not envision teaching issues to arise as a result of FTE attrition.

B. List College (or campus) departments that currently do or could *possibly* assist in the delivery of courses for your graduate group. Can you envision future merging with other graduate groups, to maintain teaching of the graduate curriculum? While merging may not be of benefit, there are additional opportunities as described below.

C. Are there additional opportunities between graduate groups or other interdisciplinary groups towards developing successful graduate training grants:

- Historically, students in GGNB complete coursework from a variety of disciplines and faculty from several other graduate groups participate in the GGNB course. These groups include but are not limited to Epidemiology, Cell and Molecular Biology and Molecular, Cellular and Integrative Physiology.
- Future opportunities that should be explored include collaborative funding efforts among the members of Foods for Health Institute and the GGNB.
- In addition, the new graduate group, *Nursing Science and Health-care Leadership* can provide several collaborative opportunities that are currently being explored. We envision the development of core courses that incorporate key concepts in behavioral health, health promotion, community health education, system change, and health policy that would be taught by faculty from both groups.
    - Given the overlap in clinical interests particularly related to behavior and lifestyle modification to optimize health, the two graduate groups are envisioning the development of a training pathway that incorporates a training core shared by the two programs, with goals of developing successful graduate training grants.

D.List other strategies that should be considered to deal with attrition and potential FTE reductions. Funding opportunities for collaborations among graduate groups with overlapping content areas and training goals.

E.Please provide other relevant comments.

Pharmacology and Toxicology Graduate Group

February 5, 2010

To: College Planning Committee, Agricultural and Environmental Sciences
From: Alan Buckpitt, Pharmacology and Toxicology Graduate Group

Impact of retirements: The three primary departments who contribute to our graduate group are: the Department of Environmental Toxicology (CAES), the Department of Medical Pharmacology (SOM) and the Department of Molecular Biosciences (SVM). I've discussed the retirement issue with Dr.Tjeerdema (CAES) and Dr. Pessah (SVM) and they expect very few retirements in the next five years and none which would affect teaching in our graduate program. We've been fortunate to add two new faculty members (to the Department of Environmental Toxicology (shared with Nutrition)) and 1 to Molecular Biosciences through the California Animal Health and Food Safety Laboratories. The Department of Medical Pharmacology has been reinvigorated with a number of new, young faculty members in the past five years and we also don't expect any retirements from this department.

Core Courses: Lectures in the 13 units of core course material offered to graduate students in PTX are covered primarily by faculty in the three departments named above. In addition, there are contributions from individuals in neurosciences. These are unlikely to be affected by retirements.

Advanced courses: In the past year, in response to concerns raised by Graduate Council, faculty in the Department of Medical Pharmacology and Neurology are teaching a course in drug development. This course has not only attracted students from our program but students from biochemistry and masters students in chemistry who have an emphasis in pharmaceutical chemistry and drug development. We anticipate a few changes in advanced courses in the next five years due to faculty turnover. One of the Federation faculty in our group has been teaching a very advanced graduate course in imaging techniques which has been tremendously popular for both our students and for students and other graduate groups. Unfortunately, salary funding to assist the instructor was very difficult to establish the last time the course was taught and is unlikely that this will be offered again unless another suitable funding mechanism is identified. Further, the course VMB 254 Toxicology of Respiratory System has 5 instructors (Hyde, Last, Gershwin, Wu and Buckpitt) who arguably could be within 5 years of retirement. In this course 13 out of 27 lectures are taught by these faculty and 6 of the remaining 14 lectures are taught by non-Senate personnel. In addition, it is important to note that faculty in the Department of Environmental Toxicology teach 75% of the advanced courses required in our graduate program. It would be important to replace any faculty who are recruited elsewhere.

Graduate group interactions: We have had students from other graduate programs take one or more of our core courses in the past. These include students from Nutritional Biochemistry, Agricultural and Environmental Chemistry and Comparative Pathology. We have the capacity to accommodate a few more students in the core. We regularly advertise our advanced courses outside the group since the information in several of these is applicable across disciplines.

Graduate training grant: One of the goals of this graduate group is to add a training grant in Pharmacology. The Executive Associate Dean of SOM has agreed to provide administrative support for this effort. Planning is currently underway. The Department of Environmental Toxicology has held a training grant for the past 35+ years so the two training activities would likely promote a fair amount of synergism. Another possible avenue would be to develop a

nutrition/toxicology training program. There is increasing evidence for the chemopreventive effects polyphenols in a variety of pathologies from cancer to heart disease.

Importance of the host department: The PTX graduate group has been hosted by the Department of Environmental Toxicology for approximately 23 years and there are several important reasons for this. This department was one of the first (perhaps was the first) department in the nation focusing on toxicology as an undergraduate major and as such the university, and the PTX graduate group has gained considerable stature by its association with this department. The faculty in this department are widely recognized as leaders in toxicology and this has brought in many of the outstanding students that the PTX program has had over the years. While we recognize that there is a move on campus to combine departments, a melding of Environmental Toxicology would have to involve cross college combinations (with parts of Molecular Biosciences and Anatomy, Physiology and Cell Biology in Vet Med) to achieve the synergism that is ostensibly the goal of such mergers. Barring such cross college combinations, we fell strongly that the graduate group would be best served by leaving the department as a separate entity. We fear that loss of identity which would be one of the natural byproducts of collapsing ETX into a larger department could have a negative impact on the overall visibility of the graduate program.

Graduate Group Information Request - January 25, 2010
College Planning Committee
Due Date: February 8, 2010

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1) Define the cutting-edge areas of scholarship of our College;
2) Maintain a world-class reputation of scholarship and leadership in these scholarship areas;
3) Consider impacts on departmental and inter-departmental undergraduate and graduate programs, as well as meeting the mission of Cooperative Extension;
4) To the fullest extent, take advantage of opportunities that may arise because of College reorganization, such as consideration of additional inter-departmental research centers that champion topical research areas across departments.

Since the CAES is planning for a *minimum* FTE reduction of 10% (or more likely 15-20%) within the next 5 years, the CPC is seeking input on the *highest* priority graduate education programs that you identify to be retained in the College and Campus. We hope the questions below will be helpful to engage graduate group faculty in discussions about priorities and opportunities that exist among departments and thus the College as a whole. In your response to the items below, we ask that you bear in mind *the realities of the budget crisis facing our college* to enable the future continuation or development of successful programs despite faculty attrition.

Please keep your responses brief (*bullet listings encouraged*) to allow for straightforward interpretation by the CPC. The same questions were part of a larger departmental survey that included questions on both undergraduate and teaching, research and outreach. Please return your responses to bvnakamoto@ucdavis.edu by February 8, 2010.

Examine the composition of your faculty in the graduate group in relation to graduate group course requirements. *We are asking for your input as to what is at risk and also what are the alternatives (other than new hires) from across the College (or entire campus).* Within that context:

A. Faculty reductions across departments will likely result in reduced faculty availability for graduate teaching. Please indicate teaching issues of concern for your graduate group that may arise from FTE attrition in the coming years.

The Plant Biology Graduate Group (PBGG) is a large, internationally renowned graduate program that plays a vital role in maintaining UC Davis's prestige and reputation for excellence in research and teaching in the biological sciences. Faculty in the PBGG represent nine departments in two colleges, and this breadth should to some degree help to buffer us from the affects of FTE attrition. Nonetheless, we have two major concerns. First, FTE attrition will likely lead to increased demands on our faculty to teach undergraduate courses, especially introductory biology courses, which will inevitably mean that fewer faculty will be available to teach in our graduate core courses (PBI 200 A, B, and C), required of all first-year PBGG students, and to lead seminars and journal clubs required of first- and second-year students. Second, loss of faculty in certain crucial areas in which we already have very few specialists may result in difficulty providing upper division / graduate courses in those areas as well as continuing to include them in the core courses, which could in turn have two results: a) we might have to drop at least one area of specialization; b) we would not be

able to continue to offer a comprehensive, well-rounded education in Plant Biology to all of our students. We would welcome the opportunity to work with CA&ES, CBS, and the relevant departments to identify areas in which loss of crucial expertise is a concern; these areas should be high priorities for faculty retention and/or future hires.

B. List College (or campus) departments that currently do or could *possibly* assist in the delivery of courses for your graduate group. Can you envision future merging with other graduate groups, to maintain teaching of the graduate curriculum?

As noted above, we already draw on faculty from multiple departments. It is nonetheless true that there are many plant biologists on campus who are not members of the PBGG, but are members of other groups, such as Genetics, Ecology, Horticulture and Agronomy, and Plant Pathology. Each of these groups is quite large and has its own well-defined emphases; at this point there does not seem to be any good reason to try to combine them, which would require major reorganization of all of their curricula. However, loss of a significant number of faculty across the departments involved could lead to a situation where it would be advisable to look at some reorganization to minimize overlap among groups and ensure that, at least for certain areas where numbers are low, there is thorough coverage in at least one, but perhaps only one, group.

C. Are there additional opportunities between graduate groups or other interdisciplinary groups towards developing successful graduate training grants;

There are some interdisciplinary areas that would be most effectively addressed by developing collaborations among groups. For example, linking social sciences, basic and applied natural sciences and the humanities could be very appealing and attractive subjects for training grants. We recognize that graduate groups should take the lead in organizing training grant applications, but we would be very appreciative of the support and participation of the colleges in helping us to undertake such efforts.

D. List other strategies that should be considered to deal with attrition and potential FTE reductions.

Include graduate program representatives in discussions of college and departmental hiring.
Cross-group participatory seminars and journal clubs for credit.
Cross-group core courses (would require significant reorganization, but worth looking into).
Increase opportunities for enrollment of upper-division undergraduates in graduate group courses.
Increased involvement of advanced graduate students and postdocs in training of beginning graduate students.

E. Please provide other relevant comments.

We appreciate the CPC's request for input from Graduate Groups on the important issues associated with anticipated FTE reductions. More broadly, we would like to encourage increased participation of graduate program representatives in college and departmental planning, since we believe that maintaining the strengths of our graduate programs is essential to maintaining excellence of research and teaching at all levels.

Plant Pathology Graduate Program Response to
Graduate Group Information Request - January 25, 2010

A. Faculty reductions across departments will likely result in reduced faculty availability for graduate teaching. Please indicate teaching issues of concern for your graduate group that may arise from FTE attrition in the coming years.

Instruction in the plant pathology graduate program requires expertise in many areas, most of which are well covered by our existing faculty. One current deficiency is in fungal molecular biology, which is our number one recruitment priority.

Other gaps may emerge over the next five years but the areas in which they occur will depend on when current faculty members elect to retire.

B. List College (or campus) departments that currently do or could *possibly* assist in the delivery of courses for your graduate group. Can you envision future merging with other graduate groups, to maintain teaching of the graduate curriculum?

Plant Sciences faculty members could contribute to one or more of our existing courses and perhaps to a new course that would address a current deficiency in fungal molecular biology.

Merging with another graduate program/group would serve no useful purpose, if we are interested in continuing to train plant pathologists.

C. Are there additional opportunities between graduate groups or other interdisciplinary groups towards developing successful graduate training grants;

We have shared interests and complementary expertise with faculty members in Nematology, Plant Sciences, Viticulture and Enology, Entomology, ARE in CA&ES, as well as units in CBS, which offer excellent opportunities for development of competitive proposals for training grants. Closer attention to these possibilities should be one positive outcome of the current planning process.

D. List other strategies that should be considered to deal with attrition and potential FTE reductions.

At such time as our faculty no longer fully represents the breadth of expertise required to staff all of our courses, we may be able to fill some gaps through remote access to existing PLP courses at other institutions.

E. Please provide other relevant comments.

Soils and Biogeochemistry Graduate Group

Responses to Impact of CAES FTE Reductions from members of SBG Graduate Group

A. Faculty reductions across departments will likely result in reduced faculty availability for graduate teaching. Please indicate teaching issues of concern for your graduate group that may arise from FTE attrition in the coming years.

Of course fewer faculty will have fewer graduate students. We are seeing losses in disciplinary strength and diversity. We have already lost most of our irrigation technology and management faculty. We have some continuing strength in CE but will lose much of that soon. We have no research in salt affected soils or their management. We have Randy Southard who does some mineralogy, but we have lost a lot of expertise in this. We have little remaining strength among faculty in soil management. Toby O'Geen remains the single soil management guy. When Stu Pettygrove retires we will have lost much of the soil management strength. Will Horwath can only do so much and his strength is fertility rather than physical management.

There will be a serious Impact. We have a strong remote sensing and GIS component of many of the landscape scale, ecosystems biogeochemistry research we do. This is also important for students who take jobs with consulting firms - skills in GIS. With the retirement of Susan Ustin and Richard Plant this leaves a huge academic gap for the training of our students.

Given our laboratory intensive courses and several large enrollment courses, adequate TA support is critical to maintaining our high quality teaching program (for undergraduate and graduate education) and to provide FINANCIAL SUPPORT AND TRAINING FOR OUR GRADUATE STUDENTS. Many of our core courses with laboratory sections have increased in size in the past 5 years without any additional TA support.

Two SBG faculty members with strengths in plant-soil-water interactions plan to retire within 5 years. Thus SSC-208 (plant-soil interrelationships) or PBI-210 (plant ecophysiology) will not be taught.

Teachers for core courses in ESM

B. List College (or campus) departments that currently do or could possibly assist in the delivery of courses for your graduate group. Can you envision future merging with other graduate groups, to maintain teaching of the graduate curriculum?

SBG courses, as well as undergraduate soils courses in LAWR, provide a unique and unreplicated set of learning experiences and intellectual resources on campus and within the UC system. Most of our courses provide key knowledge needed (and assumed to be available to them) by a large number of other graduate programs. These include Environmental Engineering, Ag and Environmental Chemistry, Chemistry, Ecology,

Horticulture and Agronomy, Vit and Enology, Microbiology, Geology, Hydrologic Sciences, International Agriculture and Development (IAD), Plant Pathology.

On the other hand, SBG students take courses in other programs but, given the disciplinary breadth of SBG students, these courses are scattered throughout a number of different programs and do not map on just one or two other graduate programs. Depending on the particular interests of our students, we might get some help from Geology, Hydrologic Sciences, Environmental Toxicology. Otherwise, I think we are on our own.

Possibly some limited possibility to cooperate with Dept. of Plant Science and Plant Biology; however, their courses are not oriented to soil protection and management and the overlap would be quite small for the overall SBG program. For example, there is no known overlap in the areas of plant-soil interactions and plant ecophysiology; faculty that could teach SSC-208 with the details of re root development, morphology, architecture, physiology, modeling, and chemical, physical, and microbiological interactions with soil are not available. Previously PBI-210 was taught in EVE, but that program could not cover the class so an SBG faculty member (Richards) has been teaching this core class now.

Consider partnering with Engineering for a campus wide program “Water Science and Engineering” , or with Engineering and Ecology for a program in “Environmental Remediation and Restoration”, or similarly titled graduate program (with tracks). Our critical priority is to meet the labor needs for atmospheric scientists, hydrologists, soil scientists and environmental specialists whose projected employment by the US Bureau of Labor will increase by 15, 18, 15 and 28%, respectively in the next decade.

Distance learning
Webinars
Web–based with video links to other UC or CSU campuses

A leading model for department and graduate programs is to move towards “Earth Systems Science”, which would require we add some expertise in interdisciplinary, systems-level environmental processes as we lose some of our disciplinary faculty.

C. Are there additional opportunities between graduate groups or other interdisciplinary groups towards developing successful graduate training grants;

I don't know. There is already a concern that we have diluted soil science significantly. With the soil and biogeochemistry track in the SBG graduate program, some of our graduates may not end up with enough soil science to market themselves as "experts". They may be ecologists with a bit of soil science, but that is quite different than being a soil scientist.

Collaborate with Ag Sustainability Institute, Ecology AOE in Agroecology, Hort and Agronomy, Hydrology, IAD for training grant in Sustaining Agriculture and Food Systems on a Rapidly Changing Planet.

Collaborate with Engineering (Civil and Environment, Biological and Ag), Ecology and Hydrology in Ecological Engineering (for lack of better term).

Provide alternative graduate experience in soils and international resource management: We offer a participatory graduate seminar in tropical soils management coupled to internships in community-driven development projects overseas (e.g., Engineers without Borders project in Uganda)

D. List other strategies that should be considered to deal with attrition and potential FTE reductions.

Let us agree to be THE Ag and Env. Sci. campus and recruit our colleagues from other UC campuses to UCD where the critical mass needed to stimulate interaction and achieve excellence can be found.

Consider short-term academic appointments rather than career FTE appointments, to include: i) increasing adjunct professor appointment to assist with teaching – this could be something that is competitive and marketed as a benefit to the individual and providing them with a link to the campus. ii) Advertise the prestigious aspect of an adjunct professor appointment with UCD/LAWR. iii) Increasing Researcher and Visiting Researcher appointments
Reduce the number of reports and committee meetings required of faculty.

The Dept. of LAWR is actively exploring creative ways to continue teaching all or most of our courses that are critical to address the impacts of climate change, water scarcity and soil resource depletion on agriculture and environmental services:
1. Consolidating chemistry labs from two courses into a common laboratory section
2. Distance learning: We already teach one course (ATM 280A/B) that includes UC Merced students & another is being developed collaboratively with a CSU campus. We have proposals in for the UC/CSU initiative and Kearney Foundation of Soil Science to develop additional long distance offerings. Distance learning has been applied by CE on occasion and is likely to increase in CE activities
3. Increase potential for CE specialists to obtain I&R appointments to formalize their teaching effort, in part in our graduate programs.

Reduction of senior administrative positions.

E. Please provide other relevant comments.

Spread the teaching duties across the colleges. Faculty are almost always enthusiastic about teaching across campus to relieve local pressures. We could become stronger and teach less if we streamlined.

Plant ecophysiology on campus is severely under staffed due to recent retirements and with impending retirements will become even more so. This is an essential discipline for

graduate student training many aspects of agriculture and environment, plant breeding, and adaptation to climate change, to name just a few key areas.

I am concerned to note that even non-replacement of retirements will not allow us to balance our budget in the next year.

The Soils and Biogeochemistry graduate program is unique among other UC campus and we strive to maintain our excellence in our disciplines. It is likely that within five years that LAWR, where many of the SBG faculty are housed, will lose approximately one-third of its senate and CE personnel. We will need to employ an adaptive strategy to maintain our strengths in these disciplines. Additionally, with the expertise of our recent hires, an interdisciplinary graduate program along the lines of Environmental Systems Sciences will emerge, especially if we can secure a few new hires in the next five years to facilitate this integration of core strengths within LAWR.

To realistically achieve the campus and College goals and priorities in water, environmental quality and climate change, it will be necessary to continue to invest at some level in SBG as well as other graduate programs. Without such investment, the casualties will include the capability to grow funding in the biogeochemistry and climate change area, as well as the high ranking of the SBG program, among others. Importantly, the future of all programs on the campus will depend increasingly on greater outside funding, and the areas of biogeochemistry, environmental quality and climate change, all key foci of the SBG group, have the greatest potential for generating substantially more extramural funding in the environmental sciences.

Graduate Group Information Request - January 25, 2010
College Planning Committee
Due Date: February 8, 2010

In addition to requesting information from departments, the CA&ES College Planning Committee (CPC) is seeking information from graduate groups, as CPC working groups develop recommendations regarding alternative organizational models for the CA&ES that:

1) Define the cutting-edge areas of scholarship of our College;
2) Maintain a world-class reputation of scholarship and leadership in these scholarship areas;
3) Consider impacts on departmental and inter-departmental undergraduate and graduate programs, as well as meeting the mission of Cooperative Extension;
4) To the fullest extent, take advantage of opportunities that may arise because of College reorganization, such as consideration of additional inter-departmental research centers that champion topical research areas across departments.

Since the CAES is planning for a *minimum* FTE reduction of 10% (or more likely 15-20%) within the next 5 years, the CPC is seeking input on the *highest* priority graduate education programs that you identify to be retained in the College and Campus. We hope the questions below will be helpful to engage graduate group faculty in discussions about priorities and opportunities that exist among departments and thus the College as a whole. In your response to the items below, we ask that you bear in mind *the realities of the budget crisis facing our college* to enable the future continuation or development of successful programs despite faculty attrition.

Please keep your responses brief (*bullet listings encouraged*) to allow for straightforward interpretation by the CPC. The same questions were part of a larger departmental survey that included questions on both undergraduate and teaching, research and outreach. Please return your responses to bvnakamoto@ucdavis.edu by February 8, 2010.

Examine the composition of your faculty in the graduate group in relation to graduate group course requirements. *We are asking for your input as to what is at risk and also what are the alternatives (other than new hires) from across the College (or entire campus).* Within that context:

A. Faculty reductions across departments will likely result in reduced faculty availability for graduate teaching. Please indicate teaching issues of concern for your graduate group that may arise from FTE attrition in the coming years.

Textile graduate group (MS only) is a cross departmental program with members from textiles and clothing, chemical engineering and material sciences, viticulture and enology, sociology, agricultural economics. One member will retire in Fall 2011, which may affect one graduate course. However, we should be able to find other graduate level courses to cover or to expand.

B. List College (or campus) departments that currently do or could *possibly* assist in the delivery of courses for your graduate group. Can you envision future merging with other graduate groups, to maintain teaching of the graduate curriculum?

Chemistry, cultural studies, agricultural economics.

If there is a future merge, it could impact delivery of some current graduate courses. As long as the core faculty members are committed to the program the merge should not affect much.

C. Are there additional opportunities between graduate groups or other interdisciplinary groups towards developing successful graduate training grants;

Yes, in fact, we are considering several options to expand the connection with other programs. Since the Textile program is a multidisciplinary program textile MS students could enter Ag Chem, and cultural studies as Ph.D. students.

D. List other strategies that should be considered to deal with attrition and potential FTE reductions.

Increase faculty membership and look for traineeship grants, endowment support.

E. Please provide other relevant comments.

Appendix H

CA&ES GRAD STUDENT COUNT BY LOCATION

	Fall 2004	Fall 2005	Fall 2006	Fall 2007	Fall 2008	Fall 2009
Ag & Res Economics	92	89	87	86	80	90
Animal Science	115	104	102	71	70	73
Bio & Ag Eng	25	25	21	24	24	28
Entomology	48	44	56	42	40	35
Env Design-Landscape Arch	29	16	14	20	18	23
Env Sci & Policy	75	56	78	80	79	78
Env Toxicology	49	23	20	22	14	12
Food Science	59	46	42	44	42	51
HCD - Comm Dev	68	57	49	52	36	40
HCD - Hum Dev	42	47	33	37	37	37
LAWR	103	93	85	100	95	82
Nematology	1	15	7	9	8	7
Nutrition	75	72	71	78	72	76
Plant Pathology	44	36	41	37	39	39
Plant Sciences	152	142	137	129	140	155
Textiles & Clothing	23	24	17	13	12	12
Viticulture & Enology	50	55	47	44	39	42
WFCB	41	56	51	46	50	48
TOTAL	**1091**	**1000**	**958**	**934**	**895**	**928**

[Data from Helen Paik, ARM]
TMK 2-4-10

Appendix I – Programmatic Needs Alphabetically by Graduate Group

This list only includes urgent needs (within the next 5 years) that were explicitly identified.

Agricultural and Environmental Chemistry uses two courses offered by Chemistry and ETOX as core, required courses for all Ag Chem students. A loss of either of these core courses would have a large impact on the group.

Animal Biology may be impacted by a loss of an endocrinology course.

Atmospheric Science will soon be affected by the imminent retirement of the two atmospheric climate process experts in LAWR. This will lead to loss of several global climate change classes taken by graduate and undergraduate students in Atmospheric Science and other groups. This is a large loss to CAES and campus, as climate change research is a growing area of strength for the College and UC Davis.

Avian Sciences is concerned at loss of Advanced Avian Science because of a retirement. Also, a loss of avian researchers from the Vet School would represent a loss of a disciplinary area for the group.

Community Development is already lacking sufficient courses in gender and social equity in labor and urban development.

Geography faces the retirement of the professor who teaches their core in Geographical Concepts. Geography also echoed CD's need for courses in social equity and urban development.

Horticulture and Agronomy projects the loss of crop production faculty for several major crops.

An upcoming retirement in LAWR in the area of remote sensing will affect Hydrologic Sciences, Geography, Ecology, and other graduate groups.

Hydrological Sciences will be affected by the retirement of hydrological modelers, as will the wider campus initiative in global change. Replacing this position is a priority for LAWR. As mentioned above under Atmospheric Sciences, the campus lacks expertise in climate modeling, and Hydrologic Sciences supports LAWR's application for such a position.

International Agricultural Development already uses paid lecturers for their core courses, citing the difficulty of getting departments to release faculty for graduate teaching.

Pharmacology and Toxicology is currently in good shape, but is heavily reliant on lecturers from ETOX. Therefore, any merger involving ETOX would need to pay strict attention to impact on this graduate program.

Plant Pathology needs expertise and a course in fungal molecular biology.

Soils and Biogeochemistry lacks expertise in salt-affected soils and their management; there has been an overall loss of strength in soil management. They will be affected by retirements in the area of remote sensing and GIS (similarly to several other groups). They will need someone to teach plant-soil-water interactions within five years.

Appendix J – Descriptions of Critical Research Areas of CA&ES Programmatic Areas

Agricultural & Food Systems (AFS)

Agroecology – An interdisciplinary framework of natural and social sciences that studies the interconnectiveness of productivity, stability, sustainability and equitability of agroecosystems from the farm to community and global scales.

Bio-based Materials- Research to help the transition from petroleum-based energy and products to renewable biological resources, such as plants, in order to provide fibers, plastics, films, food additives, oils, and fuels.

Complex Microbial Systems - Foster an understanding of the function of and interconnections between microbial species in agricultural and other ecosystems, in order to promote agricultural sustainability and to understand global warming.

Energy- and Water-efficient Agriculture – Development of sustainable agricultural practices in relation to energy and water use.

Environmental Genomics – Study of genetics recovered directly from environmental samples, as opposed to conventional clonal laboratory cultures, enabling studies of organisms that are not easily cultured in a laboratory.

Biotechnology – A set of technologies in which a living organism or a system derived from one or more living organisms is directed to generate a product or a service. Includes the use of genetic engineering and cell- and tissue cultures and other techniques for modifying living organisms.

Foods for Health and **F**ood Safety - A comprehensive research perspective considering all aspects of food, from production to consumption, and the health and safety of the individual.

Fermentation Science - Study of the fundamental and applied sciences related to the use of microorganisms as production and processing agents.

Food Security – Ensuring that all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.

Food Processing - Methods and techniques used to transform raw ingredients into food or to transform food into other forms for consumption by humans or animals either in the home or by the food processing industry.

Integrated Pest Management - An effective and environmentally sensitive approach to pest management that relies on a combination of common-sense practices. IPM uses current, comprehensive information on the life cycles of pests and their interaction with the environment. This information, in

combination with available pest control methods, is used to manage pest damage by the most economical means, and with the least possible hazard to people, property, and the environment.

International Agricultural Development - Interdisciplinary approaches to improve food production, distribution and nutrition programs, and to address problems of inequality and want in developing and less-industrialized regions of the world.

Precision Agriculture – Using site-specific methods, precision agriculture involves studying and managing variations within fields that can affect crop yield, using new tools such as GPS and computer-assisted technologies.

Sustainable Animal and Crop Production Systems - Interdisciplinary research and outreach programs that integrate economic profitability, environmental health, and social and economic justice in agricultural and food systems for California and the world.

Viticulture - The science, production and study of grapes in the vineyard, also known as viniculture. Practices include monitoring and controlling pests and diseases, fertilizing, irrigation, canopy management, monitoring fruit development and characteristics, deciding when to harvest, and vine pruning.

Human Ecology, Resource Economics & Policy (HEREP)

Built Environments **–** A term used to describe the interdisciplinary field of study which addresses the design, construction, management and use of human-made surroundings and their relationships to the human activities.

Economic Sustainability- The efficient and responsible use of resources, as discussed in monetary terms.

Human Development and Behavior – Research relevant to the psychological, psychobiological, language, behavioral, and educational development of humans.

Regional Change - Refers to both the intentional and unintentional processes that shape the form, function, and outcomes of social, biological and physical systems on a regional scale.

Human-Agricultural-Environmental Interactions - Interactions of human activities with their physical environment, including the agricultural environment.

Environmental Economics & Policy - Theoretical or empirical studies of the economic effects of national or local environmental policies around the world. Particular issues include the costs and benefits of alternative environmental policies.

Sustainable Communities – Development and applications of innovative strategies that produce living communities that are environmentally sound, economically prosperous, and socially equitable.

Transportation - Multidisciplinary research on emerging and important transportation issues, including policy, both regionally and globally, in areas such as travel behavior and new vehicle technologies that reduce environmental impacts.

Urban-Rural Interfaces - Interactions between urban, suburban, or exurban development and rural landscapes.

Natural Resources and Ecosystem Science & Management (NRESM)

Biodiversity and **E**cosystem Services - Benefits to society from biological diversity, conservation, and the functioning of natural ecosystems (animal, plant, and microbial).

Climate Change Impacts on Environment **-** The study of changes in modern climate, generally known as "global warming," and their effect on the earth's natural environment and society, including human health.

Conservation Biology - The study of the nature and status of earth's biodiversity with the aim of protecting species, their habitats, and ecosystems from excessive rates of extinction.

Environmental Health - The study of environmental-based health problems such as global change, infectious diseases, groundwater contamination, and trace-metal poisoning.

Environmental Informatics - Systems to manage, model, and distribute large data sets relevant to solving problems in the agricultural and environmental sciences, including geographic information systems and remote sensing technology.

Invasive Species - Non-indigenous species (e.g. plants or animals) that adversely affect the habitats they invade economically, environmentally or ecologically.

Natural Resource Policy and Management - Interdisciplinary approaches applying economics, policy, and management practices to the preservation of natural resources.

Sustainable Ecosystems - Research that addresses the sustainability of natural and managed ecosystems.

Water and Watersheds and **G**lobal Change - Science-based solutions to support sustainable watersheds as California's urban population grows and global climate change impacts water management programs.

Appendix K – CA&ES Faculty Head Count versus FTE Count

CA&ES 2009-2010 FACULTY HEADCOUNT vs FTE COUNT(as of 3/9/2010)

	FTE				Headcount		
Department	**I&R**	**AES**	**CE**	**Total**	**I&R / AES**	**CE**	**Total Headcount**
Ag & Res Economics	15.46	9.24	4.00	28.70	25	4	29
Animal Science	13.40	13.80	8.30	35.50	27	9	36
Bio & Ag Eng	3.18	7.74	1.00	11.92	14	1	15
Entomology	7.18	11.22	2.50	20.90	17	4	21
Env Design-LDA	6.34	1.66	0.20	8.20	8	0	8
Env Sci & Policy	15.89	4.46	0.80	21.15	21	1	22
Env Toxicology	4.61	4.59	1.00	10.20	9	1	10
Food Science	7.10	7.15	5.00	19.25	16	5	21
HCD - Comm Dev	4.73	1.87	1.00	7.60	8	1	9
HCD - Hum Dev	6.73	3.27	1.00	11.00	10	1	11
LAWR	11.32	13.39	9.30	34.01	27	9	36
Nematology	2.70	2.95	0.85	6.50	6	1	7
Nutrition	8.38	5.37	1.50	15.25	14	2	16
Plant Pathology	6.15	9.30	2.85	18.30	15	4	19
Plant Sciences	24.12	31.41	21.91	77.44	57	23	80
Textiles & Clothing	3.00	2.00	0.00	5.00	5	0	5
Viticulture & Enology	4.67	7.08	2.00	13.75	12	2	14
WFCB	5.57	3.33	1.00	9.90	9	1	10
TOTAL	**150.53**	**139.83**	**64.21**	**354.57**	**300**	**69**	**369**

Faculty & CE Specialists are not counted in more than one CA&ES department.

For those with split FTE in more than 1 dept, their head is counted in the dept that has the faculty member's majority FTE.

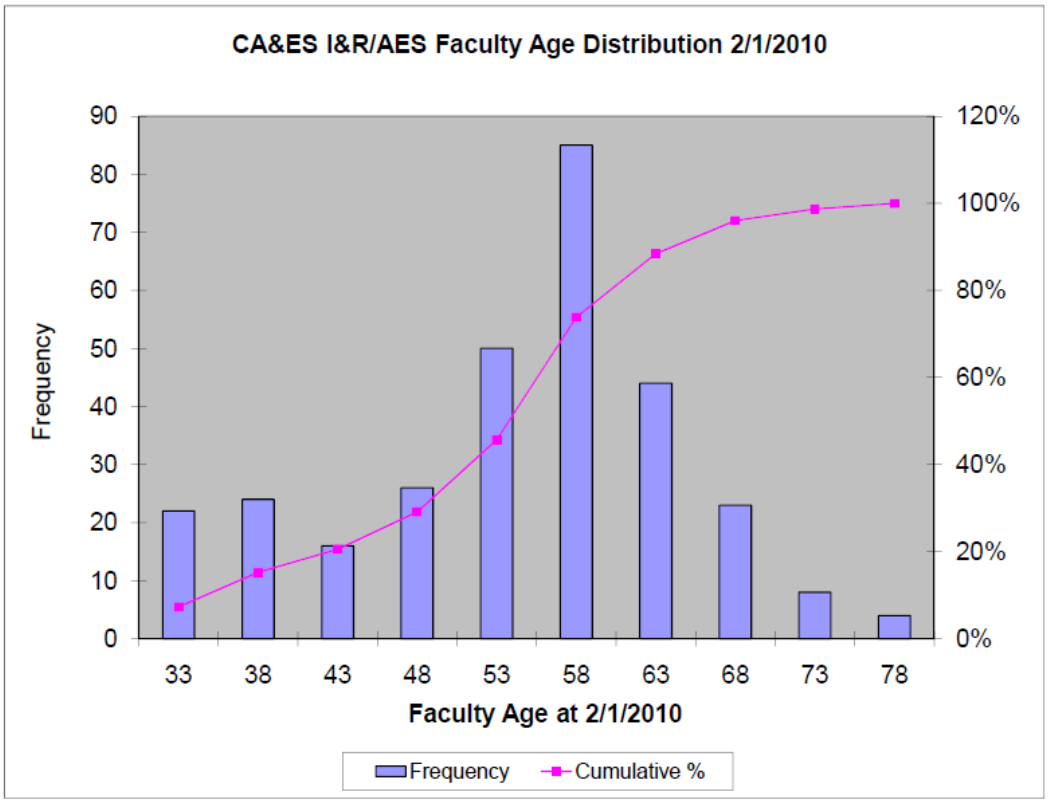
Appendix L – CA&ES Faculty and CE Demographics

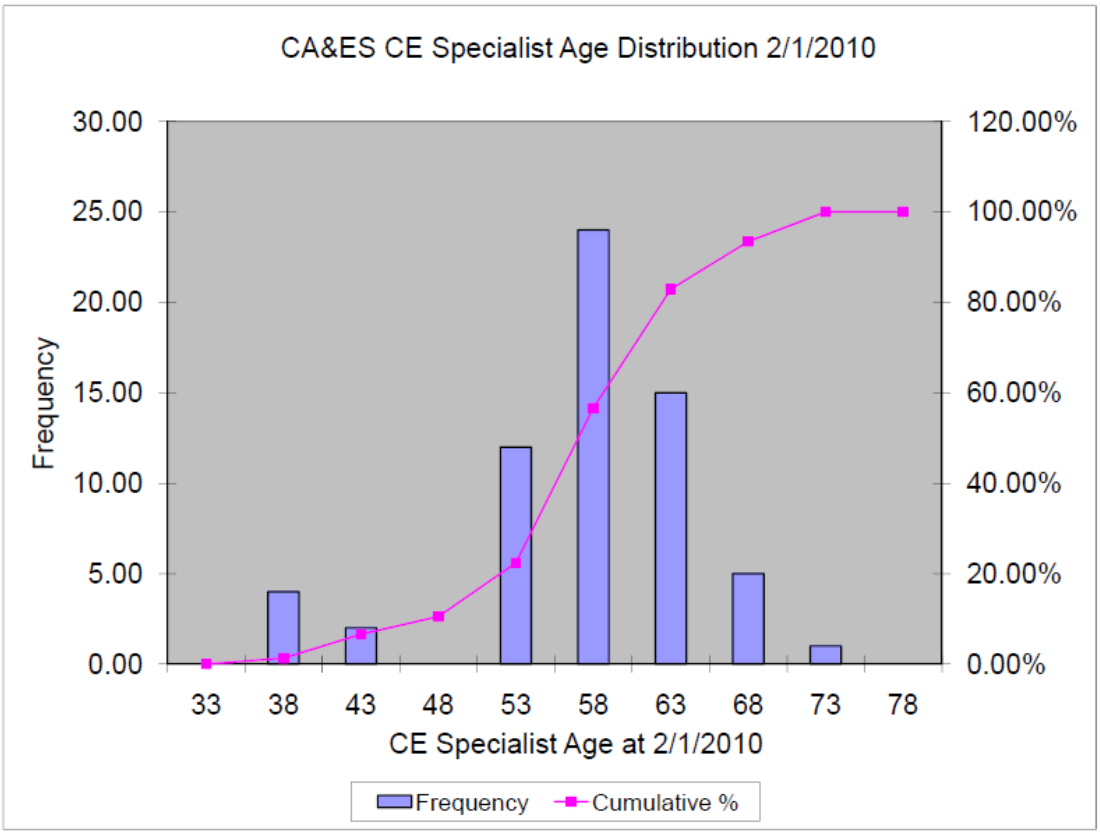
CA&ES FACULTY DEMOGRAPHICS
I&R / AES FACULTY AGE AT 2/1/2010

Age	30-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	71-78	Total
Department										
Ag & Res Economics	3	3	1		4	7	2	4	1	**25**
Animal Science	2	1	1	2	4	10	5		2	**27**
Bio & Ag Eng	2	2		4	2	5				**15**
Entomology	1	1		3	2	8	2	1		**18**
Env Design-LDA	1	1		1	2	1	1	1		**8**
Env Sci & Policy	3	2	1	4	2	5	4		1	**22**
Env Toxicology		2			4		1	1	1	**9**
Food Science	1	2	1	3	2	2	2	2		**15**
HCD - Comm Dev	1		2		1	2	1	1		**8**
HCD - Hum Dev	1	1		1	1	2	1	1	2	**10**
LAWR	2	1	4		7	6	3	1	1	**25**
Nematology					3		1	2		**6**
Nutrition	1	2	1		3	3	2	2		**14**
Plant Pathology	1	1		3	1	6	2	1		**15**
Plant Sciences	2	6	3	3	9	18	10	3	3	**57**
Textiles & Clothing					1	3		1		**5**
Viticulture & Enology			1	2	3	4	2			**12**
WFCB	2			1	1	3	1	1		**9**
TOTAL	**23**	**25**	**15**	**27**	**52**	**85**	**40**	**22**	**11**	**300**

CA&ES FACULTY DEMOGRAPHICS
CE SPECIALIST AGE AT 2/1/2010

Age	30-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	71-75	Total
Department										
Ag & Res Economics					1	2	1			**4**
Animal Science		1	1	1	1	2	1	1	1	**9**
Bio & Ag Eng							1			**1**
Entomology					1	2	1			**4**
Env Sci & Policy				1						**1**
Env Toxicology							1			**1**
Food Science				1	2	1		1		**5**
HCD - Comm Dev					1					**1**
HCD - Hum Dev		1					1			**2**
Landscape Arch										**0**
LAWR		1		1	1	4	1	1		**9**
Nematology						1				**1**
Nutrition					1	1				**2**
Plant Pathology					1	2	1			**4**
Plant Sciences		1	1	2	5	8	5	1		**23**
Textiles & Clothing										**0**
Viticulture & Enology		1				1				**2**
WFCB			1							**1**
TOTAL	**0**	**5**	**3**	**6**	**14**	**24**	**13**	**4**	**1**	**70**


CA&ES I&R/AES Faculty Age Distribution 2/1/2010
Frequency
90
80
70
60
50
40
30
20
10
0
120%
100%
80%
60%
40%
20%
0%
33
38
43
48
53
58
63
68
73
78
Faculty Age at 2/1/2010
Frequency
Cumulative %


CA&ES CE Specialist Age Distribution 2/1/2010
Frequency
30.00
25.00
20.00
15.00
10.00
5.00
0.00
120.00%
100.00%
80.00%
60.00%
40.00%
20.00%
0.00%
33
38
43
48
53
58
63
68
73
78
CE Specialist Age at 2/1/2010
Frequency
Cumulative %

Appendix M – CA&ES Undergraduate Majors and Student Numbers

UC Davis Undergraduate Enrollment
First Majors by Discipline
Fall 2003 - Fall 2009
College of Agricultural & Environmental Sciences

Agricultural Sciences	Fall 2003	Fall 2004	Fall 2005	Fall 2006	Fall 2007	Fall 2008	Fall 2009
Agricultural Mgmt & Rangeland Resource	17	17	13	24	26	20	12
Agriculture & Environmental Education					4	11	24
Agricultural Systems & Environ	11	3		1			
Animal Biology	178	169	174	212	218	239	244
Animal Science	530	512	556	647	676	704	728
Animal Science & Management	59	66	57	45	46	65	78
Avian Sciences	26	24	23	25	15	17	12
Biotechnology	234	224	235	262	271	274	246
Crop Science & Management	24	21	30	39	43	32	13
Ecological Mgmt & Restoration							6
Entomology	18	12	16	19	15	21	22
Plant Sciences							11
Viticulture & Enology	76	73	82	95	103	95	101
Agricultural Sciences Total	**1,173**	**1,121**	**1,186**	**1,369**	**1,417**	**1,478**	**1,497**

Environmental Sciences	Fall 2003	Fall 2004	Fall 2005	Fall 2006	Fall 2007	Fall 2008	Fall 2009
Atmospheric Science	26	27	21	24	23	21	18
Environ Hort & Urban Forestry	34	34	34	36	32	47	43
Environ Policy, Analy & Plan	72	72	75	81	87	120	151
Environ Sci & Management							121
Environmental Biology & Mgmt	67	61	74	67	68	90	59
Environmental Planning and Management				1			
Environmental Resource Science	71	68	53	64	80	119	82
Environmental Toxicology	51	51	47	43	53	59	79
Hydrology	5	7	9	8	9	13	21
Landscape Architecture	59	74	68	66	76	77	79
Pre-Landscape Architecture		32	66	83	96	105	104
Soil & Water Science	5	8	7	3	5	7	5
Wildlife & Fisheries Biology	1	1				1	1
Wildlife,Fish & Conserv Bio	142	132	126	128	107	140	151
Environmental Sciences Total	**533**	**567**	**580**	**604**	**636**	**799**	**914**

Report date: 10/26/2009

UC Davis Undergraduate Enrollment
First Majors by Discipline
Fall 2003 - Fall 2009

College of Agricultural & Environmental Sciences

Human Sciences	Fall 2003	Fall 2004	Fall 2005	Fall 2006	Fall 2007	Fall 2008	Fall 2009
Agricultural Econ & Bus Mgmt				1			
Agricultural & Managerial Econ	7		1	3	2	1	2
Applied Behavioral Science							1
Clinical Nutrition	127	143	166	217	258	298	299
Community & Regional Developmt	94	112	129	156	144	157	189
Community Nutrition	1						
Design *	246	214	161	71	18		
Dietetics	1						
Fermentation Science	5	5	1		1		
Fiber and Polymer Science	2	4	11	23	21	12	7
Food Biochemistry	4	3	2	1			
Food Science	79	96	118	154	163	168	187
Human Development	417	419	414	400	361	386	429
International Agric Developmt	20	26	28	19	16	26	34
Managerial Economics	481	463	403	431	442	493	523
Nutrition Science	115	138	155	211	233	238	248
Pre-Design	67	67	12	4	1	1	
Pre-Managerial Economics	207	261	325	363	352	350	331
Textiles & Clothing	75	73	77	75	74	83	84
Human Sciences Totals	**1,948**	**2,024**	**2,003**	**2,129**	**2,086**	**2,213**	**2,334**

UC Davis Undergraduate Enrollment
First Majors by Discipline
Fall 2003 - Fall 2009

College of Agricultural & Environmental Sciences

Exploratory, Individual, Visiting & Limited	Fall 2003	Fall 2004	Fall 2005	Fall 2006	Fall 2007	Fall 2008	Fall 2009
Exploratory	982	942	767	518	679	792	745
Individual	6	9	5	3		1	
Limited Status					1		2
Visitors		1					1
Exploratory, Individual, Visiting & Limited Total	**988**	**952**	**772**	**521**	**680**	**793**	**748**
College of Agricultural & Environmental Sciences Total	**4,642**	**4,664**	**4,541**	**4,623**	**4,819**	**5,283**	**5,493**

MAJORS HEADCOUNT - 3 QUARTER AVERAGE 2008-09

Department	Major	2008-09 3 qtr avg enrollment	Dept total
Ag & Resource Economics	Ag & Managerial Economics (DISCONTINUED)	1	
Ag & Resource Economics	Managerial Economics	544	
Ag & Resource Economics	Pre - Managerial Economics	295	840.0
Animal Science	Ag & Env Education	11	
Animal Science	Animal Science	676	
Animal Science	Animal Science & Management	60	
Animal Science	Avian Science	16	763.0
Entomology	Entomology	20	20.0
Environmental Design	Landscape Architecture	93	
Environmental Design	Pre - Landscape Architecture	86	179.0
Environmental Science & Policy	Environmental Biology and Management	80	
Environmental Science & Policy	Environmental Policy Analysis and Planning	119	
Environmental Science & Policy	Environmental Science & Management (NEW)	3.5	202.5
Environmental Toxicology	Environmental Toxicology	68	68.0
Food Science & Technology	Food Science	170	170.0
Community Development	Community & Regional Development	159	
Community Development	International Agricultural Development	28	187.0
Human Development	Human Development	407	407.0
Land Air & Water Resources	Atmospheric Science	20	
Land Air & Water Resources	Soil & Water Science	6	
Land Air & Water Resources	Environmental Resource Science	112	
Land Air & Water Resources	Environmental Science & Management (NEW)	3.5	
Land Air & Water Resources	Hydrology	15	156.5
Nematology	Animal Biology	220	220.0
Nutrition	Clinical Nutrition	297	
Nutrition	Nutrition Science	218	515.0
Plant Sciences	Ag Mgt & Rangeland Resources	19	
Plant Sciences	Biotechnology	258	
Plant Sciences	Crop Science & Management	24	
Plant Sciences	Ecological Management & Restoration (NEW)	1	
Plant Sciences	Environmental Horticulture & Urban Forestry	43	
Plant Sciences	Plant Sciences (NEW)	1	346.0
Textiles & Clothing	Fiber and Polymer Science	9	
Textiles & Clothing	Textiles and Clothing	85	94.0
Viticulture & Enology	Viticulture and Enology	96	96.0
Wildlife & Fisheries Biology	Wildlife, Fish, & Conservation Biology	139	139.0
DEPARTMENT SUBTOTAL		**4,403.0**	**4,403.0**
Dean's Office	Exploratory Program	701	
Dean's Office	Individual Major	2	703.0
COLLEGE TOTAL		**5,106.0**	**5,106.0**

Appendix N – Faculty responses to Departmental Reorganization Options

Agricultural and Resource Economics

Forums / CPC 3-5-10 DRAFT Reports: CA&ES Departments - Strategic Options / Agricultural and Resource Economics Feedback

Economics of Agriculture, Natural Resources and Environmental issues, by Dan Sumner, ARE - Brenda Nakamoto (Mar 9, 2010 9:51 AM)

Last Edited By Brenda Nakamoto on Mar 9, 2010 9:53 AM

The importance of maintaining a strong disciplinary department

Some universities or institutes have attempted to scatter economists who work in applied areas across multiple departments (food science, nutrition, horticulture etc.) This is seldom successful because the quality of hires, the quality of peer economists and the the quality of evaluation tend to be low.

As we downsize CAES at Davis it is crucial to keep a central core of economists together in a disciplinary department. The economics of different specific subject matters varies little and a critical core of economists can maintain disciplinary skills while applying those skills to applied topics. Frankly, having 3rd rate economists scattered around multidisciplinary departments is worse than not having applied economists at all.

Re: Economics of Agriculture, Natural Resources and Environmental issues, by Dan Sumner, ARE - Travis Lybbert (Mar 10, 2010 3:04 PM)

As a junior faculty member, I second this perspective. It's hard to overstate the value to young economists of the continued professional development that is possible in a strong disciplinary department. In economics, a researcher must stay staying sharp in the discipline in order to make meaningful contributions to interdisciplinary projects. This principle should shape both graduate education and new faculty recruitment.

Re: Economics of Agriculture, Natural Resources and Environmental issues, by Dan Sumner, ARE - Rachael Goodhue (Mar 10, 2010 3:25 PM)

I endorse Dan's insights completely. Many of us in ARE address topics within all three critical research areas: agricultural and food systems, human ecology, and natural resources and ecosystem science and management. We collaborate with researchers in a wide variety of other disciplines. As a department, ARE provides us with a core group of peers that further our intellectual development.

Re: Economics of Agriculture, Natural Resources and Environmental issues, by Dan Sumner, ARE - Aaron Smith (Mar 10, 2010 11:27 PM)

I would comment further, but Dan said it better than I could. I agree with him completely.

Re: Economics of Agriculture, Natural Resources and Environmental issues, by Dan Sumner, ARE - James Fadel (Mar 11, 2010 5:08 PM)

I think it is critically important for Agricultural and Resource Economics to remain intact as a department independent of the Department of Economics. I am familiar with the courses taught and the research in the Department of ARE and they are fundamentally different than Economics. Jim Fadel

Re: Economics of Agriculture, Natural Resources and Environmental issues, by Dan Sumner, ARE - Pierre Merel (Mar 12, 2010 7:59 AM)

I fully agree with what Dan and Travis wrote. I would add that multi-disciplinarity should not, in my view, be a goal in itself, and so I am skeptical about using it as a potential guide for departmental re-organization. I believe multi-disciplinarity arises naturally when the answering of research questions necessitates a combination of expertise(s)

from different disciplines. I think faculty collaborations across departments are functioning very well as of today (I am myself involved in two projects) and will not benefit much from mergers. Merging with departments that are not strictly in our discipline also raises the daunting question of what standards our research will be evaluated against.

ARE feedback - Karen Klonsky (Mar 9, 2010 2:36 PM)

The sentences at the beginning of each department review about stability should be in the singular, not plural.

I hate the term Human Ecology. It has no meaning other than a replacement for Home Economics.

Critical Research Areas - Colin Carter (Mar 10, 2010 2:17 PM)

The so-called "critical research areas" fail to cover much of the research that takes place in the Department of Agricultural & Resource Economics, a Department that regularly ranks in the top 2 or 3 nationally. I suggest you change "Environmental Economics & Policy" to "Economics and Policy" - a more general category that would help correct the problem.

Strengths of the ARE Department - Colin Carter (Mar 10, 2010 2:23 PM)

The document says that the "large numbers of undergraduate and graduate majors" is a key strength. Besides the fact that we do not have graduate "majors", our strength is the high quality of the graduate program. Likewise our undergraduate major is of high quality as is evidenced by the great jobs obtained by the Managerial Economics majors.

The quality of both the graduate and undergraduate programs should be noted.

The document says that ARE has "a clear and clean major" - what does that mean exactly? I think we can be more precise when describing our major.

Re: Strengths of the ARE Department - Rachael Goodhue (Mar 10, 2010 3:21 PM)

As Colin noted, the quality of our graduate program is an important departmental strength. As reaffirmed in our recent graduate program review, UCD has one of the top few programs in agricultural and resource economics in the country.

Our undergraduate major in managerial economics builds on our department's strength as a faculty of applied microeconomists, and provides rigorous training in theoretical and empirical analytical techniques. Our graduates are successful in a variety of jobs requiring business management skills.

Temporary Crisis, Permanent Harm - James Chalfant (Mar 11, 2010 10:55 AM)

I guess I'm still missing the point of this exercise. My colleagues have put our shared views concerning ARE very well.

Speaking more broadly, I guess I'm not seeing why 12 is a magic number for department size, and most important of all, what problem this solves. Why not 10? Or 20? Department cultures are easy to ruin and hard to build; we ought to make any changes because the entire faculty in affected departments developed a shared vision for their future and organization, not because people outside their disciplines, no matter how smart otherwise, decided that the departments must be the same, because they sound like they are. Proposing to merge Economics and ARE because we both have Economics in our names, with no further analysis, certainly seems like a good example. Departments do more than distribute mail. They are a collection of faculty who vote on each other's merits and have shared visions about delivering our mission---how can this be decided with this process?

And even if it could be done, why are we dealing with a temporary budget crisis by making permanent changes? If we have indeed conceded that our college will continue to shrink, and be permanently smaller, then I guess we should talk about how to do so. The rhetoric and advocacy I see from Oakland does not yet concede the point, and I hope that we never do.

Today's LA Times describes the CPEC forecast of continuing increased demand for a UC education:

http://www.latimes.com/news/local/la-me-college-enroll11-2010mar11,0,3378089.story

And we have a new Chancellor who has asked whether we should shrink or grow.

The entire exercise seems like the wrong thing to think about, at exactly the wrong time. The fact that we might need to shrink in the future, or that we might need to merge or restructure or close departments someday, doesn't imply that we should hurry and do it now. Why not put our energy toward trying to reverse our decline?

Chairs response- Richard Howitt - Jan Hopmans (Mar 11, 2010 7:25 PM)

Last Edited By Brenda Nakamoto on Mar 12, 2010 8:59 AM
Last Edited By Brenda Nakamoto on Mar 12, 2010 8:58 AM
Last Edited By Jan Hopmans on Mar 11, 2010 7:27 PM

UC DAVIS: DEPARTMENT OF AGRICULTURAL AND RESOURCE ECONOMICS

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To CA&ES College Planning Committee

From Richard Howitt, Chair Agricultural & Resource Economics Department

March 11, 2010

I have read the draft report, and would like to strongly urge the committee to adopt strategic option number 1 for Agricultural and Resource Economics department.

While we have demonstrated and always followed a strong departmental tradition of cooperation with other departments, our integrity and efficiency as a disciplinary unit has significant and overwhelming advantages. In fact, it is the strong basis in a single discipline that allows us to undertake joint research across the college departments and other departments on campus, without jeopardizing the quality of publications necessary for advancement within the UC system.

The success of this approach is clearly demonstrated by the ranking of the Department faculty nationally (2nd), and the rankings for both graduate programs for PhD and MSc degrees, respectively second and first in the nation. In addition, our undergraduate major is in high demand and has to be regulated by a higher than average grade point.

In all these teaching programs, we have sufficient enrolments to operate with economies of scale, and see no academic savings or advantages in curriculum or administration by combining the programs with either Economics, as proposed in option 2, or ESP as proposed 1n option 3. We do see significant academic and operational difficulties by the academic combinations considered in options 3 and 3.

Thank you for considering these points in your planning process.

Collaboration - Daniel Sumner (Mar 12, 2010 7:44 AM)

The economists in ARE have pursued an incredible range of collaborations with colleagues throughout the University. The list is too long to cite, but the main point is that this collaboration is a part of a long standing tradition and is the result of deep interests in serious solutions to applied issues.

Furthermore this work, whether on animal welfare, climate change, invasive species, international commodities markets or myriad other topics is far deeper and more useful than could possibly achieved if the disciplinary core of agricultural and resource economics was diluted.

The real problem we have is the huge demand for more agricultural and resource economists given the teaching, research and outreach demands in California.

Animal Science

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Forums / CPC 3-5-10 DRAFT Reports: CA&ES Departments - Strategic Options / Animal Science Feedback

Peter Robinson comment: Department of Animal Biology and Conservation - Jan Hopmans (Mar 9, 2010 3:28 PM)

Last Edited By Brenda Nakamoto on Mar 11, 2010 2:53 PM
Last Edited By Jan Hopmans on Mar 9, 2010 3:32 PM

I have read the draft CPC report (dated March 5, 2010) with particular emphasis on comments relative to the Department of Animal Science. I have a few comments.

A longstanding goal of departments of animal science worldwide, even before they emerged (mostly) from departments of animal husbandry, was a focus on production by humans of meat, milk and fiber from domesticated species. Indeed this is so well ingrained in the mind of many persons, including regulators, potential students, politicians, scientists and many lay persons, that simply announcing that one is from the 'Department of Animal Science' creates an instant recognition of who you are, where you are from and what you do. And, in general, this is a positive recognition. Thus I was surprised to find no recognition of this history and current reality in the draft document. Well, 'surprised' may be too strong a word since the emphasis on 'production of meat, milk and fiber' in the Department of Animal Science has been waning for years in favor of a more generalized view of 'animal science' as being any biology related to any animal at any level of organization anywhere. This is, in my view, unfortunate as it creates (and has created) a mélange of activities by faculty in the current Department of Animal Science that are increasingly internally unrelated.

The suggestion, on page 38, of a merger of the Department of Animal Science with the Department of Wildlife, Fish and Conservation Biology to create a new department named the 'Department of Animal Biology and Conservation' would be disastrous if there is any intention of maintaining a focus on production by humans of meat, milk and fiber from domesticated species in this new department. It is inconceivable that a CE Specialist, such as me, could introduce myself to a dairy farmer near Tulare as: "Hello, my name is Peter Robinson and I am from Department of Animal Biology and Conservation at Davis" with any expectation that the person would think me there with any purpose other than to check on migratory waterfowl on his pond is inconceivable. So if the desire is to finally kill any focus on production by humans of meat, milk and fiber from domesticated species within UC, well, this new name would certainly do that.

That said, hard times call for change. If this merger is required, the best alternate name that I can think of would be the 'Department of Animal and Wildlife Sciences'. Other schools have gone this way and survived. However I would caution the group to resist suggestions that create nebulous department names that end in the word 'biology' as the current Department of Animal Science has numerous faculty that engage in research that, while including biology, are not solely biology. Indeed, the ability of departments of animal science to think and work holistically has been one of their historical strengths.

Finally, on page 45, like its normal treatment by UC Davis as an afterthought, in this case after even the appendices, there is talk of increased integration of CE into the teaching mission. This would presumably be via joint IR/CE appointments but, no matter how they are structured, classroom undergraduate teaching and cooperative extension are a very difficult combination as the former ties the person to campus while the latter demands flexibility to leave campus at the drop of a hat. How a CE can be expected to '. . . may solidify the college's outreach and extension presence . . .", while be tied to classroom teaching is a mystery to this CE Specialist.

Peter Robinson

CE Specialist

Animal Nutrition and Management

Re: Peter Robinson comment: Department of Animal Biology and Conservation - Alison Van Eenennaam (Mar 10, 2010 10:28 AM)

I share Peter's and Ermias' concerns about the proposed department name change, but am perhaps more concerned about further expanding the scope and responsibilities of ANS such that the department ends up being weak in all areas. I am worried that the envisioned "shared vision" resulting from the merger of WFCB would mean that everyone would keep doing what they are doing, and so the departmental focus would grow even broader than it currently exists, and with retirements this would effectively weaken rather than strengthen the department. That is not to say I do not recognize or respect the importance of WFCB, it just seems this merger is based on the fact that both departments deal with animals. I agree with Tim Caro's comments that "conservation of wild places and efficient farming are miles apart (with the exception of land use management strategy, but none of us do that anyway); thus I suspect there would be little coordination or added value from collaboration among these two sets of colleagues".

Would this new department be envisioned to fit under the College's "Agricultural and Food Systems" or "Natural Resources and Ecosystem Science and Management" programmatic area? This may seem a trivial question but the answer is important. As an Agricultural Scientist by training and interest, I joined UC Davis to work on applied problems of animal agriculture, and I would have a difficult time remaining in a department whose focus was not on "Agricultural and Food Systems".

I am also concerned that given impending retirements and the fact that ~ 26% of the faculty in the ANS department are CE, we are going to have a very small number of INR faculty remaining to teach over 800 undergraduates in the three majors the department offers. Adding another 151 undergraduates from WFCB would seem to exacerbate that problem.

With regards to the CE summary report on page 45, as I understand it, there is some opposition to giving INR appointments to existing CE specialists and so the vision of having CE specialist have more teaching responsibilities seems unlikely unless this changes. Additionally, having CE specialists responsible for classroom teaching would likely require buy in from ANR. Personally I would have hard time committing to being on campus two or three days a week for a quarter to take on classroom responsibilities, and I think my extension program would suffer if I had to teach. However if downsizing necessitated it, I would not be willing to do so in the absence of an INR appointment and senate membership. Such an appointment however, would presumably come with an expectation of more basic research which would take time from outreach and applied research. Given some of the recent changes to granting programs (e.g. AFRI) to focus a higher proportion of grant funds to projects with a strong outreach component, such appointments may actually harm extramural funding potential of the college in the long run.

Alison Van Eenennaam
CE Specialist
Animal Biotechnology and Genomics

comment on strategic options - Ermias Kebreab (Mar 9, 2010 4:46 PM)

I read the document with interest. I am just getting to know the department of Animal Science let alone other departments within CA&ES so i will limit my comment to the options that relate to Animal Science.

I think that 'Animal Science' as a brand at UC Davis is very well known internationally and I strongly recommend not to make any changes to it. While in England I remember a school being named 'School of Agriculture, Policy and Development' just to be inclusive. As a result, not too many people know about Animal Science at U. of Reading.

This does not mean that I am against the merger. Infact including WFCB would add another dimension within the department. Why not maintain WFCB as a unit within Animal Science if a merger is necessary?

Ermias Kebreab

Departrments and the Structure of the College - Barry Wilson (Mar 10, 2010 2:47 PM)

Dear Dean and Committee:

I was trained as a zoologist, joined what became the Department of Avian Science and after having been its chair, joined the Department of Animal Science when they were merged. I am also a 0 FTE member of the Department of Environmental Toxicology. My current interests are Developmental Biology of Muscle, Ecotoxicology, Pesticides and Neurotoxicology.

My preferences in the structure of the College are:

To maintain a strong departmental base:

1. Departments are the level at which teaching, research and CE decisions are made , and where the creative interactions of the College should be initiated . Departments should have clear cut missions of research and application. Instructional tasks should be as flexible as needed. Adequate time, space and funds must be provided for this vital part of the College. The size of individual departments should be based on the nature of the disciplines represented and the needs of the State. Specifically, I see no reason to incorporate WFCB with either of the departments in which I am a member so long as it is functions acceptably by itself within the integrated structure of the College. With all due respect, I am unaware of strong evidence that departments need be limited to certain numbers of individuals.

2. Departments should be grouped under several divisions based on the natural groupings of the missions of the College and the needs of California. Probably no more than 4-5 Divisions will suffice. Administration FTE's need not be increased if the executives of the Divisions were drawn from the chairs of the departments on a rotating basis.

3. Cooperative Extension specialists should be based within the departments, perhaps with an Associate Dean assigned to help with their special affairs. The more the efforts of CE faculty are integrated with others in the departments and with the field specialists the better it will be for the College as a whole.

4. The missions of the College should continue to include both Agriculture and Wildlife. The rapid advances in knowledge of biology, chemistry and physical sciences and the

equally rapid urbanization of California place agricultural research, teaching and application squarely in the middle of how we humans deal with global ecosystems. Fields and farms, prairies and forests, rivers and lakes, villages and megacities are interrelated on a small planet with limited resources. For example, the pesticides sprayed on orchards and forests run off into the same streams and expose the same people.

In closing, my comments stem from my efforts as a professor in the interests of the people of California, research to generate knowledge , teaching to pass on that knowledge , outreach to help provide productive, safe and sustainable agricultural workplaces and wildlands, now and in the future. I am fortunate to have spent my career within this College, and proud to have played a role in its accomplishments.

What does the name of a department really matter?, Bernie May comment - Jan Hopmans (Mar 10, 2010 8:46 PM)

Last Edited By Brenda Nakamoto on Mar 11, 2010 1:42 PM
Last Edited By Jan Hopmans on Mar 10, 2010 8:47 PM

I appreciate that most of us find a sense of identity with the name of our department, but that devotion can interfere with the chance to adapt to changing times and new opportunities. “Changing times and new opportunities” is where we are now. I have found myself in seven different departments over my career at five universities: Botany and Plant Pathology, Ecology and Systematics, Animal Science, Biology, Plant Pathology, Fisheries, and Natural Resources. Our identities and professional respect are not determined by our department’s name, but rather how we are perceived by our stakeholders. Over the past 30 years my stakeholders have only cared whether I can do the job and not within what department I currently reside. I would welcome a merger with WFCB and the inclusion of any individual faculty from other departments who focus on whole organisms (of the animal kind). We should welcome the fresh air a name change and new members will bring.

-bernie

Re: What does the name of a department really matter? - Barry Wilson (Mar 11, 2010 10:37 AM)

Dear Jans:

A few comments about your comments on changing names and mergers.

1. Changing names can led to changing perceptions of those both inside and outside the university. In the private as well as public sectors, it is often a part of marketing a product, be it policie or perfumes.

2. Changing names should not be a substitute for meaningful action

3. Your comment about merger and WFCB is not merely a name game. Merging small departments to larger ones is fraught with risks for the smaller one and their constituencies. As I commented yesterday here, I need to be educated about the evidence that establishes the minimum and maximum size of departments. Groups with common interests should be easily able to form and

dissolve depending upon need. Administration of these groups is a different matter; I once proposed that Meyer Hall consolidate its business offices while leving the departmental autonomy of activities untouched. Consolidating business offices of smaller departments could bring about budgetary savings without interfering with substantive autonomies.

My best

Barry Wilson

Re: What does the name of a department really matter?, Bernie May comment - James Fadel (Mar 11, 2010 4:59 PM)

I do think the name of the department makes a difference. I think the Animal Science department should retain the name of Animal Science as part of the name in any future mergers. The name affects our stake holders and our potential to attract donors as well as our national and international reputation. A name change would also impact our undergraduate programs more than one can imagine.

Jim

Comments on Strategic option - Deanne Meyer (Mar 11, 2010 4:24 PM)

Transparency is essential so people understand both administrative and financial impact..

Departmental response - Anita Oberbauer (Mar 11, 2010 4:27 PM)

On behalf of the Department of Animal Science, I am reporting that at our faculty meeting today 95% of the 20 faculty members in attendance voted that they are willing to entertain a discussion of a merger with WFCB.

I like the new suggested department name Animal Biology and Conservation - Dietmar Kueltz (Mar 11, 2010 6:39 PM)

I like the suggestion of merging other departments, in particular WFCB, into ANS and to give this dept a new name. I learned in the past years that the name Animal Science really is very narrowly interpreted by biologists world-wide. It basically encompasses husbandry, production, and management of a very limited number of large domesticated animal, mostly mammalian, species. ANS faculty and CE represent a much greater scope of research than that. To take advantage of current funding opportunities and position ourselves well in a changing research landscape, realigning ANS with current trends seems inevitable and I think we would be well-advised to be much more pro-active in bridging sustainable animal production, animal-environment interactions, and wildlife conservation issues rather than trailing in that regard... This field represents a very active arena with plenty significant and exciting problems to tackle and solve that are of interest to many Californians, Americans, and people in other parts of the world ...
dietmar

Posted on behalf of a group of ANS faculty - Dietmar Kueltz (Mar 11, 2010 10:09 PM)

At a recent ANS faculty meeting 19 of 20 ANS faculty expressed that they would view favorably the idea to explore merger discussions with WFCB. Significant parallels in teaching and advising cultures already exist in the two departments although specifics would have to be discussed. Novel, timely research foci that address the interface of animal agriculture, biology, and conservation could be developed based on
existing expertise in the two departments.

Such initiatives are challenging but also bear tremendous forward-looking research, teaching, and outreach opportunities. Synergistic roles of livestock in restoration and agriculture's role in conservation (e.g. undeveloped grazing ranges will protect some species habitat) could be studied and show-cased more effectively when formally joining ANS and WFCB expertise.

ANS has substandial depth in experimental biology (e.g., genetic analysis, stress assessment, nutrition, reproductive physiology), which may enhance funding opportunities in wildlife areas for WFCB faculty. Likewise, many ANS faculty conduct research at a taxonomic breadth that already extends well beyond traditional limits of Animal Science. Closer interaction with wildlife colleagues would be a natural and profitable extension of present efforts, in terms of pursuing funding opportunities as well as outreach. Our undergraduate majors are already complementary and could be made more so.

The Animal Biology Graduate Group attracts several students who express an interest in WFCB areas. Sharing a common department would likely strengthen and broaden the expertise and interest of the Graduate Group. In addition, it would be natural to join Aquaculture and Fishery as well as Avian expertise that is currently scattered through both departments.

On a second point, we view a divisional reorganization of the college as counter-intuitive because it would add another layer of administrative overhead (instead of saving on that end) and split ANS and WFCB departments into separate divisions (based on the currently proposed division structure).

Jim Fadel, Silas Hung, Ermias Kebreab, Dietmar Kueltz, Jim Millam, Jim Murray, Anita Oberbauer, Janet Roser, Pablo Ross -

Biological and Agricultural Engineering

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Forums / CPC 3-5-10 DRAFT Reports: CA&ES Departments - Strategic Options / Biological and Agricultural Engineering Feedback

Maintaining a strong undergraduate engineering degree should be a priority - Jean Vandergheynst (Mar 11, 2010 6:48 AM)

We have an ABET accredited undergraduate program, Biological Systems Engineering (BSE), unique in our state that links engineering with programs in CA&ES. Outstanding students apply to the program (12+ Regents Scholars in 09-10). In 2008-09 50% of our undergraduates were women, 4% african american, and 12% chicano-latino. A recent SARI survey of BSE graduates indicated that over 60% of the survey respondents are pursuing or have obtained professional/graduate degrees. Options that disperse the BAE faculty to other departments (either in CAES or CoE) would effectively shut down a very diverse and scholastic engineering major at UC Davis.

While merging with Textiles and Clothing appears to be the only viable option that preserves BAE, it is very unclear of the expectations of BAE faculty and staff advisors in maintaining and supporting the majors associated with Textiles and Clothing. I look forward to learning more specific details in future correspondences from this committee and the Dean

Re: Maintaining a strong undergraduate engineering degree should be a priority - Rajinder Singh (Mar 11, 2010 12:00 PM)

Last Edited By Brenda Nakamoto on Mar 11, 2010 3:01 PM
Considering the broad spectrum of clientele served by the department (BAE), strategic options 1, 3, and 4 will be unable to support either the academic plans or missions of CAES or COE. The unique nature of research, teaching, and outreach, carried out by the faculty of biological and agricultural engineering, requires that the department maintain its current identity with formal links to CAES and COE as envisaged in Option 2. Merging of faculty members from the Department of Textiles and Clothing, who have strong emphasis in bio-based materials and processes, should further enhance the excellence of the overall program. More discussion is necessary to determine how the Textiles major is handled in the merged unit.

Identity of Biological and Agricultural Engineering - Rajinder Singh (Mar 11, 2010 12:16 PM)

Considering the broad spectrum of clientele served by the department (BAE), strategic options 1, 3, and 4, will be unable to support either the academic plans or missions of CAES or COE. The unique nature of research, teaching, and outreach carried out by the faculty of Biological and Agricultural Engineering requires that the department maintain its current identity with formal links to CAES and COE as envisaged in Option 2. Merging faculty members from the Department of Textiles and Clothing, who have strong emphasis in bio-based materials and processes, should further enhance excellence of the overall program. More discussion is necessary to determine how the Textiles major is handled in this type of merger.

Michael Delwiche comments - Michael Delwiche (Mar 11, 2010 9:45 PM)

Of the various academic goals and organizational options, it is clear to me that building on the current academic structure of the department makes the most sense for CA&ES, and the CoE. BAE is a unique program in the UC system and provides CA&ES with a critical engineering dimension to the activities

of the AES. Furthermore, BAE provides the CoE with general curricular content combining the life sciences with engineering (and not simply limited to human medical engineering). But to have an undergraduate major accredited by ABET, the degree must come from the CoE.

Distributing the engineering expertise of the faculty among other departments in CA&ES is a prescription for mediocrity, and would quickly kill the program. My guess is that most of our faculty would look elsewhere for positions. This certainly is not a way to produce closer links with other departments – just the opposite. It's hard to imagine a department whose faculty have stronger linkages to other departments than BAE. We have joint appointments with 4 other departments in CA&ES and combine research and outreach activities with departments throughout CA&ES, as well as the CoE, CBS, and Vet Med.

Shifting the department entirely to the CoE, is a nonstarter – there simply are not the FTE resources to make this happen. But more to the point, our faculty are highly committed to the mission of the AES. That is why most of us chose an engineering path less traveled. Losing the connection with the mission-oriented research of the AES and our colleagues in CA&ES is not what we want. We must continue to strike a balance between both colleges.

Combining faculty from TXC in the bio-based materials and bio-processing areas with BAE makes some sense, and our faculty are open to exploring the options. Of course, the devil is in the details. There could be ways that our faculty contribute teaching expertise to bio-based materials curricular content, and their faculty contribute to our biophysical properties content. It's hard to see how the social sciences aspects of TXC fit within BAE's academic activities, but we might provide an administrative harbor.

Tina Jeoh's comments - Tina Zicari (Mar 11, 2010 11:52 PM)

Last Edited By Brenda Nakamoto on Mar 12, 2010 9:04 AM

One of the primary reasons that I chose to join the BAE faculty at UC Davis 2-years ago is the strong national academic reputation of the department. The BAE department and the BSE major at UC Davis are viewed from the 'outside' as one of the top in the nation, alongside similar programs at Cornell and Purdue. This high regard amongst our peer programs is valuable on many levels, including attracting a consistently high caliber of students to our graduate program and providing junior (and seasoned) faculty an edge in competing for extramural funding. It makes strategic sense to build upon this foundation and to continue to strengthen the program. As I see it, options 3 and 4 presented in the report will diminish our competitiveness. Dispersing our faculty across other departments would effectively erase the existence of this program from the national conscious and I strongly feel that this option should not be considered. Moving the program entirely into CA&ES or CoE will have a similar outcome, simply because we will no longer be comparable and recognizable to our peer programs nationally who also straddle the two worlds of agriculture and engineering. Option 1 seems the most palatable, however there seems to be concern that we are on the edge of the 'critical mass'. I disagree with the weaknesses stated for option 1 in that because of the many joint appointments already existing between BAE and LAWR, FST and TXT, that further integration and coordinating of teaching (if deemed necessary) would likely not be limited. Option 2 is an intriguing option that could benefit the program by expanding our core capabilities. However, as already expressed by my colleagues' comments, the implications of a merger with TXT is not entirely clear. Finally, I would like to express that our undergraduate students should not be overlooked in this process. We currently have a robust undergraduate major supported by dedicated faculty in the department. I agree with Jean's comments that maintaining or strengthening the BSE major should be one of our priorities in this process.

David Slaughter Comments Regarding Impact on BAE - David Slaughter (Mar 12, 2010 8:49 AM)

Last Edited By Brenda Nakamoto on Mar 12, 2010 9:07 AM

Strategic Options identified for BAE in the CPC Draft Report:

1. Maintain current structure

2. Merge with Textiles and Clothing

3. Shift department entirely over to College of Engineering (COE)

4. Split BAE between LAWR and FST

Four strategic options were identified in the CPC report regarding BAE. I will address my comments to options 3 (shift to COE) & 4 (split-up BAE) first. In my opinion, options 3 & 4 would both destroy the department and the EBS major. It would happen more quickly under option 4, but in the long-term it would occur under option 3.

The BAE department at UCD currently has, and has always had a reputation as one of the premiere institutions world-wide in biological & agricultural engineering. This is especially true internationally. Under option 4, BAE engineers would be merged into non-engineering departments where we would loose critical mass, visibility and our ability to attract high quality graduate students would decline. On the teaching side, there is little in common between the majority of the courses taught by BAE faculty and those in any other department in CA&ES. It would be unrealistic to expect any in CA&ES outside BAE to teach courses in the EBS curriculum and given the ABET requirements it is unlikely that BAE faculty would have the time to teach courses outside the EBS curriculum. The primary perspective on research in BAE is quite different from most of our CA&ES colleagues. This would manifest itself in terms reduced of allocation of departmental resources and new FTE for research efforts views as a low-priority by non-engineers.

BAE is fundamentally devoted to developing engineering solutions to problems supporting the mission of the Ag. Experiment Station. Under option 3, it is unlikely that newly hired faculty would retain their AES appointments, with significant pressure to retain the AES FTE within CA&ES, of which BAE would no longer be a member. The new faculty would likely receive 9 month appointments, which is the standard in COE. Without AES support it is unlikely that BAE could maintain the infrastructure needed to conduct agricultural research. There would be a disincentive to conduct research related to the mission of AES and the agricultural aspect of BAE would likely be lost within 10 to 15 years.

If you look at the CPC report for option 2, you see that most of the comments are from the TXC faculty perspective. In many ways this option is similar to option 1 from the BAE perspective. It leaves the BAE critical mass intact. There are not likely to be any gains in teaching efficiencies that do not already exist with our current joint FTE appointment with TXC. For both options 1 & 2 there seems to be an unfounded belief that BAE faculty have some trouble integrating with other departments in CA&ES. It is unlikely

that the level of integration would increase under option 2 or decrease under option 1. BAE faculty interact with other faculty in CA&ES on a daily basis. Our teaching is primarily in COE, which given the ABET demands for engineering instruction, is unlikely to be easily integrated with other teaching programs in CA&ES regardless of where BAE faculty are placed in CA&ES.

From a budgetary standpoint, option 2 is the most likely to offer some budgetary relief with minimal adverse affect on BAE and the EBS major.

Posted on behalf of Shrini Upadhyaya, BAE - Mary Delany (Mar 12, 2010 10:23 AM)

I looked at the Strategic plan again. I prefer option #1 and am open to option #2. If option #2 is selected, we need to be careful about how the teaching programs of Textiles and Clothing will be merged with ours. While some faculty in Textiles and Clothing may be well suited to teach some of our graduate and under graduate courses, I am not sure if we will be able to teach any of their classes.

I do not like options 3 and 4. Under option #3, we loose our close connection to the CAE &S. Although our degree programs (bachelors and graduate) are offered in the COE, almost all of our research activities are directed towards solving major issues related to agriculture. It is that connection that makes us unique.

Option #4 will essentially lead to the ultimate elimination of our teaching program. A few of the faculty members may be able to find a good fit for their research activities in LAWR, FST, or PES. However, several members may not have an ideal place in CAE &S. They may have to find a home in COE. In the medium to long run, this situation will lead to further weakening of research in such areas as agricultural mechanization.

So I prefer option #1 or 2 in that order.

Entomology

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Forums / CPC 3-5-10 DRAFT Reports: CA&ES Departments - Strategic Options / Entomology Feedback

From Jim Carey, ENT - Mary Delany (Mar 6, 2010 6:34 PM)

As a modified concept derived from several options laid out in the College Planning Committee Draft Report, I suggest considering the following 'mixed' strategy for Entomology in the College reorganization:

1. Dispersal of certain faculty to other units i.e. one size does not fit all when it comes to restructuring; need to retain the option of 'best fit' to optimize integration and synergy at individual level. This could be done with careful negotiations with individual faculty since might turn out that a critical mass decide to 'disperse'.

2. Join with Wildlife, Fisheries and Conservation Biology in a new department named "Animal Biology, Management and Conservation" (or any number of variations of this concept). Individual faculty in Wildlife could also consider dispersing if didn't fit so well in this new configuration and theme.

A new synergy could well emerge from this configuration that focuses on animal biology, the concept of which is already in place in the form of a (large and popular) major in the College. Virtually all of the cross-cutting concepts between these two broad disciplines would be enhanced with the merging of vertebrates and insects/arthropods from taxonomy, physiology, and molecular biology to ecology, conservation and control. The academic cultures between these two groups are more aligned than is appreciated by most faculty even within the two departments inasmuch as each draws strengths from the balance of basic and applied/mission-oriented research and teaching.

Jim Carey, Professor
Entomology

Frank Zalom - Frank Zalom (Mar 11, 2010 1:06 PM)

The Entomology Department at UC Davis has been among the strongest in the country during the entire 35 years that I have been associated with it, and we are currently the top ranked department in the country. Our graduates are well placed, and by any measure the department continues to grow in stature. I believe that we continue our legacy of excellence by looking and thinking forward, not back. I further believe that there must be some distinct focus on insects as a subject of research on management, ecology and basic biology in a college such as ours.

Our department can justify its independent status based on all of the above, and indeed I hope that this will be possible. That said, if indeed there is a need for departments to merge into larger units, I hope that it will be done based not on convenience but on enhancing academic programs. The opportunity that I see for programmatic enhancement involving Entomology was discussed in option 2 mentioned for the WFCB concerning an animal biology program unit including Animal Science, WFCB and Entomology - this is somewhat different from that presented in option 4 for entomology and I believe more visionary. I could also envision Nematology joining such a unit. Were this to actually occur, I would highly recommend that there be divisions within this massive department, and that Entomology or possibly Entomology and Nematology be one of the divisions.

CA&ES lunacy - Penelope Gullan (Mar 11, 2010 1:33 PM)

I am very unhappy about the waste of faculty time over and the dreadful consequences of this divisive exercise to reorganize departmental units in our College. Departments in CA&ES have national and international reputations and destroying the current structure and names can only have negative consequences. Such mergers are unlikely to encourage faculty collaborations, as there are already numerous opportunities to collaborate with others on campus. Plus there will be detrimental effects on teaching programs and majors, which nobody seems to have addressed adequately. There has been no convincing arguments for any saving of money as a result of mergers. If some units are considered too small to be viable, there are better ways to address this problem than by drawing the entire college faculty into this sham process of democracy. I have decide to resign from UCD and this college nonsense contributed to my decision.

Penny Gullan

1. Preserve ENT 2. Merge with Nematology 3. Merge with ESP 4. Merge with ESP+WFCB 5. Merge with WFCB - Louie Yang (Mar 11, 2010 3:20 PM)

To the CPC committee,

Thanks for all your hard work organizing this committee and developing your recent committee report. As a new faculty member in the Department of Entomology, I wanted to share my concerns and suggestions regarding the potential reorganization of our department and our college.

I favor a plan (Entomology options 1 and 2) to preserve the existing organization of our department, perhaps with the welcome inclusion of faculty from Nematology. I believe that the strength of our department (currently ranked #1 in the US) stems from a combination of our focus and breadth - we all share a taxonomic focus on insects and associated systems, and we approach these systems with a tremendous breadth of methods, including functional genomics, biochemistry, cellular biology, physiology, epidemiology, behavior, evolutionary biology and ecology.

Personally, I'm not comfortable with a departmental merger with Animal Science. While the Animal Science Department is excellent in it's own right, I am not convinced that this merger would lead to any meaningful research synergies, and I think it is more likely to dilute the existing focus of the Entomology department. I think our goal should be to increase the per capita strength of these departments, and I think we risk losing our core strengths with the proposed Animal Science merger. I am voicing a strong opinion to avoid entering into a lasting re-organization along these lines.

I am somewhat more sanguine about the merger with WFCB alone, but would favor a merger with ESP or (ESP+WFCB), to emphasize our current strengths in environmental sciences. I think this has the potential to offer some benefits, though I would still favor a preservation of the existing structure. In summary, I favor these options, in this order:

1. Preserve ENT
2. Merge with Nematology
3. Merge with ESP
4. Merge with ESP+WFCB
5. Merge with WFCB

Please let me know if you have any questions about my comments, and thanks again for your work on this committee.

Cheers,
Louie

Pest science déjà vu - Walter Leal (Mar 11, 2010 5:29 PM)

Last Edited By Brenda Nakamoto on Mar 12, 2010 9:11 AM
Dear Colleagues,

First of all, I would like to thank CPC members for their time and effort. It is regrettable, however, that the report does not incorporate the views of all stakeholders. First, the initial problems with SmartSite prevented a large majority of faculty to express their views. Secondly, College Planning will certainly affect graduate education but - in marked contrast to campus culture - graduate students were not given an opportunity to opine. Thirdly, there was limited time between the draft report and the deadline for comments. Apparently, the committee had 5 months to deliberate, whereas faculty had 5 days to respond in the week prior to final exams! I failed to understand the rush.

The number of FTE in my home department, entomology, is well above the threshold mentioned in the CPC charges (#7). Our program is number 1 in the country, according to American Analyst/Chronicle of Higher Education. Our contribution to teaching in the College is among the top departments and our standing on research is exemplary by all measures, including grantsmanship, publications in high rank journals, not to mention our invaluable contribution to California agriculture. Yet, there are a number of “strategic options” being considered involving merging entomology with other departments. Why should we merge? I think we should if we would synergize to achieve higher standards in academic excellent, teaching, or to save college resources. The proposed scenarios would not generate any savings. The Plant Science model cannot serve as a comparison here because the carrot was a new building where tentatively faculty interaction would be promoted. Even with the benefit of a single location, it ended up as a large department with small divisions. It became too large to a point that CPC recommended splitting into 2 departments! The idea of a “center of excellence in pest science” by merging Entomology with Plant Pathology is incongruous. During Neal’s first term as Dean, an ad hoc committee was charged to explore that avenue and they rejected that notion on academic grounds. While the research of 3-4 faculty members in the department can be related to pest science, our excellence in research and teaching goes beyond this field and resides also in toxicology, demography, olfaction, medical entomology, ecology, systematic, and other areas completed unrelated to plant science. This ENT+Plant Path scenario would not generate faculty synergy. On the contrary, it would certainly impair our ability to continue to deliver our academic excellence. I hope this option would be removed from the final version of the report.

I wish I had more time to read the entire report and possibly provide additional comments, but given the deadline I would restrict my comment to only one of the strategic options regarding entomology.

Again, thank you for your time and effort. WSL

Tom Scott - Thomas Scott (Mar 11, 2010 10:02 PM)

Last Edited By Brenda Nakamoto on Mar 12, 2010 9:17 AM

I want to thank the members of the CPC for their service. This was a tough assignment, with a great deal of time and thought given to addressing difficult questions. All of us in the college should be grateful that members of the committee worked so hard on such an important task.

My responses are largely limited to the Entomology Department (ENT) because that is where I reside and thus is the situation with which I am most familiar.

I favor option 4 (merge ENT and WFCB), but not as written on page 10. A more compelling presentation for the same concept is presented as option 2 on pages 38-39 of the WFCB section. The notion of creating a new unit emphasizing “organismal biology, management, and conservation of animals” is an engaging new concept that with the right leadership has the potential to elevate, through complimentary expertise in areas of mutual interest, contributions of individual faculty and

the new department as a whole. Benefits of this new synergy are more in line with maintaining and even elevating excellence in the college than any other option presented for ENT.

Option 1, status quo, is a workable plan for the short term, but I worry that over a period of years it would result in the gradual withering away of ENT. Ultimately and justifiably the department would be eliminated. Due to demographics in our department in the next 5-10 years retirements will exceed acquisition of new FTEs. Department support will be increasingly disadvantaged by fewer and fewer faculty and thus smaller and smaller RAC formula allocations for department support. It is difficult for me to envision how option 1 will be sustainable.

I am opposed to the remaining 3 options because they would at best capture only a fraction of the expertise and future opportunity that currently exists in ENT. In the long term options 2, 3, and 5 would result in an overall loss of programmatic excellence (research, teaching, outreach, and service) in the college.

Option 2: I would love for the 2 NEM faculty who currently have joint appointments in our department accept 100% appointments in ENT. It is my expectation, however, that other faculty in NEM would feel more comfortable in PP. Option 2, therefore, would not substantially change the composition or programmatic emphasis in ENT. In this regard, option 2 is essentially the same as option 1.

Option 3: The idea of a pest biology program has for several years been extensively discussed and dismissed for sound programmatic reason. It is somewhat frustrating that it has emerged again in the context of this document. Option 3 is unacceptable for a long list of reasons that have been previously discussed and I will not rehash here.

Option 5: We could disperse entomology faculty into other units, but to what end? How would this meet the overall goal of maintaining or increasing excellence in the college? Without a clear and compelling plan for how this would be done, the description of strengths and weakness for this option do not provide that information, this option is not well enough conceived to be considered viable.

General comments: Although the report notes on page 1 three areas of programmatic strength, I would have preferred to see stronger justification for those choices and clearer explanations for how they integrate into department by department options. This is an important point for me because I am having trouble seeing how we can craft a new structure for the college without a well conceived vision to guide the reorganization process. The current draft report could be viewed to some extent as rearrangements for convenience; such a process is unlikely to maintain or increase excellence. If we are going to make bold new advances for our college some of the proposed unions will not be popular, but they must be programmatically justifiable and academically compelling. I would prefer to see a new structure fashioned to fit a compelling new vision.

Entomology Response - Michael Parrella (Mar 11, 2010 10:09 PM)

Last Edited By Brenda Nakamoto on Mar 12, 2010 9:21 AM

March 10, 2010

To: Mary E. Delaney & Jan Hopmans
CPC Co-Chairs

Fr: Michael P. Parrella
Chair, Department of Entomology

Re: Departmental response to the initial draft of the CPC report.

The Department of Entomology held a faculty meeting on Tuesday, March 9 and a main focus of the discussion was the CPC report. We recognized the hard work that went into this effort and commend

all for their efforts. It was clear from the discussion at the faculty meeting that there were diverse opinions regarding recommendations in the report. There was general consensus that entomology faculty respond as a department, although this does not prevent faculty from sending their own comments, if they so desire. I summarize the essence of our departmental discussions regarding the five options below. I also particularly draw attention to one option not articulated in the Entomology draft that appears in the document for WFCB. This involves integration of WFCB, ANS and ENT

1. Key Academic Goal: Maintain department's disciplinary expertise and distinct academic major.
a. Organizational implication: Maintain current structure

Comment: There was strong support in the department for this option. Entomology can justify independent status based on its uniqueness (organismal focus), connection to commodity groups, national ranking across similar departments, and a strong, general, departmental identity. However, there was recognition of the challenges of going it alone in light of a reorganized college where much larger units (departments) are formed. Although there were no weaknesses identified in the CPC report regarding this option (other than an aging faculty), some faculty expressed concern that we would not be availing ourselves of potentially exciting opportunities inherent in joining with other departments (discussed in some of the recommendations that follow). If this is an option for us and we decide to go in this direction, we will maintain our undergraduate major in Entomology, develop an Entomology UG Honors Program, and would most likely take responsibility for the Animal Biology Major as well. This last point is still subject to further departmental discussion and no firm decision has been made especially given the short time window between the report and the deadline to respond. This was a concern expressed over and over at the meeting.

2. Key Academic Goal: Form a broader invertebrate biology unit incorporating insects and nematodes under one structure
a. Organizational implication: merge with Nematology

This is an option that would be supported by faculty in the Department of Entomology. We would welcome closer connection to our colleagues in Nematology and already have two positions in common. There was clear consensus that entomology faculty welcome faculty in Nematology contrary to what is stated in the CPC report. Months ago I met with Steve Nadler about such a merger and indicated to him that we would consider changing our name to Entomology and Nematology, thus maintaining an identity for both programs. In addition, I indicated that we would develop a new academic/strategic plan jointly with Nematology such that the goals and vision of both programs would be satisfied. I need to emphasize that while we have talked about such a name change, this has not been fully vetted by faculty in the Department of Entomology.

3. Key Academic Goal: Create a center of excellence in pest sciences and systems biology
a. Organizational implication: Merge ENT, NEM and PP

One of the strengths of such a merger (as noted by the CPC) would be the potential greater interaction of those focused on plant health across all the departments. As a department we recognize the excellence of Plant Pathology; however, because many faculty in the Department of Entomology are not focused on plant health-related issues, we do not believe this merger would be forging a new area of excellence for The College. For example, faculty working in the area of Medical Entomology where the focus is on the effects of invertebrates on animals (humans) and would be disadvantaged by this arrangement.

4. Key Academic Goal: Create a center of excellence in Animal Biodiversity, Conservation and Management (Note: Management was added to this original Goal to include those in all three departments dealing with management of pests)
a. Organizational implication: Merge with WFCB

We discussed this option at length in our faculty meeting, but there was a general consensus the merging with only WFCB would not be sufficient. To go in this direction, we would prefer Strategic Option 2 under the CPC recommendations for WFCB and reprinted below. Some faculty have

suggested adding Nematology to this merger and this is something that also could be considered.

2. Key Academic Goal: Build a unified college-level program of Animal Biology and Conservation with comprehensive programs dealing with managed populations both wild and domestic including both vertebrate and invertebrates
a.Organizational implication: Merger with Animal Science and Entomology to form a department of Animal Biology, Conservation & Management.

The strengths of such a new compilation as outlined in the CPC report include the following: it would bring together existing strengths among departments in areas such as physiology, behavior, genetics, and ecology; the addition of avian biologists from ANS would strengthen representation of this organism group for WFCB; the new "department" could provide a stable home for the Animal Biology major, since these are three of the four departments that currently support that major; there are already strong links between WFCB and Entomology in areas such as behavior, genetics, conservation, aquatic ecology, and disease ecology; and there is a strong commitment to the value of specimen collections. Some faculty felt very strongly about such a merger, stressing the complementarity and synergy that could occur from such a grouping. Other faculty were not convinced and much more discussion would be needed on this option. Concerns expressed included the potential loss of visibility of Entomology as a discipline, co-location issues, problems with merits and promotions and general problems associated with such a large department.

5. Key Academic Goal: Strengthen other units by addition of ENT faculty
a. Organizational implication: Disperse faculty into other units

This option would destroy any ability to maintain Entomology/Insect Science at the molecular, cellular and organismal level at UC-Davis and would have a dramatic impact on our teaching program. Davis is recognized as a leading program in Entomology/ Insect Science nationally and internationally. This would weaken the College.

Environmental Science and Policy

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Forums / CPC 3-5-10 DRAFT Reports: CA&ES Departments - Strategic Options / Environmental Science and Policy Feedback

Transportation Technology and Policy - Susan Handy (Mar 8, 2010 4:09 PM)

The following correction is needed: Option 6 for ESP (bottom of pg. 12) talks about the "transportation technology program" potentially fitting into a new Regional and Community Planning Department. To clarify, Transportation Technology and Policy is a graduate group, housed in the Institute of Transportation Studies, and is not movable as a part of this process. Some ESP faculty are core faculty in the TTP program and they are potentially movable, but not the program itself. Instead of the current language, the option should read: "The policy faculty in ESP who focus on transportation could fit..."

I would also argue that not all of the ESP transportation faculty would be a good fit in a new regional and community planning department. In particular, those focusing more on technology than on policy do not have a clear connection to the proposed department. This weakness should also be noted for Option 6.

natural science/social science synergies in ESP - Benjamin Orlove (Mar 8, 2010 4:40 PM)

ESP is unique in the college because it integrates natural and social science, both in our teaching and in our research. The problems that we study--natural resource management, conservation, transportation, climate, water--are of great importance to the state and the nation nd the world. Whatever changes take place, we should keep the balance of these two components (natural science and social science), and remain at a scale where integration occurs.

Ben Orlove

Social Science in CAES - Andrew Latimer (Mar 9, 2010 2:40 PM)

The CPC report contains a lot of language about keeping ESP small to ensure that the social science component of that department is fully integrated yet not overstretched. This seems to raise some important questions for the College if it wants to do anything other than maintain status quo.

Is there is a truly a narrow range of acceptable proportions of social scientists in an environmental department, and if so what is that range, and why? Is this range controlled mainly to stimulate research, or to maintain sufficient intradepartmental influence for the social scientists? Both of which are of course legitimate reasons. But it would be useful to understand which are at play for which options -- it's difficult for me to discern any of this in the committee report.

how best to promote interactions and department size - Alan Hastings (Mar 10, 2010 4:40 PM)

One issue that comes up throughout the report is the potential advantages of larger departments for promoting interactions and collaboration. I would strongly suggest this is not the case. True collaborations arise either because of previous shared interests (which can easily happen across departmental lines) or because new shared interests are found, which is much more likely in departments of the size of about 20. Larger departments not only allow disciplinary clusters to form that minimize interactions, but almost force them to occur and thus would likely lead to less

interaction between different disciplines. We need to know clearly what the goals of reorganization are and be careful to maintain the kinds of structures that have led to departments or programs that are truly excellent, especially those that have successfully bridged across disciplinary boundaries.

Clearly extremely large departments, or departments without a common vision of what constitutes excellence, are going to be less effective.

Social/natural science balance - Marissa Baskett (Mar 11, 2010 3:05 PM)

This builds on what Alan said and might help address Andrew's question:

I have heard that the committee is interested in the "new faculty" perspective, so I offer some thoughts about my personal experience as a fairly new faculty (1.5 years) in ESP: I have found that one of the greatest parts of my experience at UC Davis so far is the broad range of interactions with faculty from different fields and disciplines. These interactions have helped to expand my thinking and spawned exciting collaborations as I build my research program here. Such experiences depend on a relatively even balance between people from different disciplines within one department, such that individuals regularly interact with colleagues both within and across disciplines. This beneficial balance between natural and social sciences in ESP would be disrupted under the options that propose merging ESP with significantly larger departments that focus on one or the other of the two disciplines (or, in the case of #6, eliminating one entirely).

Paul Sabatier Comment - Brenda Nakamoto (Mar 12, 2010 9:54 AM)

1) DO NOT TRY TO MERGE DEPARTMENTS WITH VERY DIFFERENT SCIENTIFIC STANDARDS. Scientific standards include (1) The use of intersubjectively reliable (replicable) methods of data anlalysis, (2) the d evelopment of theory that is clear, coherent, testable , and broad. The simplest criterion is the degree of sophistication in the development and testing of theory. Putting faculty with very different scientific standards in the same department creates horrible morale among faculty and students, with the more scientific members deparaging the quality of of less scientific members. It also creates very nasty splits on academic personnel actions, as different factions in the department apply different epistemolocal standards to
each others" research. And these difference are virtually impossible to resolve.

The worst possible case would be to merge ESP and CD?LA. All ESP faculty use scientific methods, while most CD faculty and LA faculty don't come close. This would result in civil war.

There are also potential problems with some the quantitative sophistication of a few non-economists among DESP social scientists. In possible mergers with LAWR and Ag Econ. But I've never seen evidence that this is a problem.

2) DON'T FORGET DISECONOMIES OF SCALE. The CPC report is very optimistic about the the ability of mergers to create ECONOMIES OF SCALE, but tends to underrate possible DISeconomies of scale. In the organizational behavior literature, the recommended span of control (number of people directly supervised) is about six. Pat Conners (DESP MSO) supervises seven staff and is ultimately responsible for sexual harassment and other serious offences for 300 undergrads and80 graduate students. TO merge DESP with LAWR would overwhelm our business office

Hope this has been helpful

Paul Sabatier

Re: Paul Sabatier Comment - Stephen Wheeler (Mar 12, 2010 11:55 AM)

Please, Paul, don't impose your definition of what is valuable research on everybody else. Other people have very different perspectives.

-- Steve Wheeler, LDA

Environmental Toxicology

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Forums / CPC 3-5-10 DRAFT Reports: CA&ES Departments - Strategic Options / Environmental Toxicology Feedback

Posted on behalf of Fumio Matsumura, Prof ETOX - Mary Delany (Mar 9, 2010 5:27 PM)

Thanks for this opportunity to respond to the CPC report.
While my first preference is to retain the identity of the Department of Environmental Toxicology as it is, if we must merge with other groups, my second choice is to merge with the Department of Wildlife, Fish and Conservation Biology based on our common interests and the similarities of the academic culture between these two departments. Other options, particularly that creating a mega-department, are not the desirable goal as far as I am concerned, since a similar trial at the UC Berkeley failed miserably as pointed out in the CPC report.

I sincerely hope that this re-organization will result in a harmonious college structure by following natural disciplinary groupings and at the same time by retaining the identities of successful programs. It has taken long time periods to build those successful programs with high reputations, and therefore it is my opinion that the highest priority should be given to the protection of the identity of those top programs.
Sincerely

Fumio Matsumura,
Professor, Department of Environmental Toxicology

ETox as a resource - Mari Golub (Mar 10, 2010 1:15 PM)

Last Edited By Brenda Nakamoto on Mar 11, 2010 3:05 PM
I am writing from the viewpoint of a professional toxicologist affiliated with the Environmental Toxicology Department. I am the member of a group of many other toxicologists that are stakeholders in the department as products, partners and consumers of the department's academic programs. Our undergraduate and graduate education and much of our continuing professional education comes from the department. Many contribute to teaching in the department and collaborate in research efforts with departmental members. Toxicologists at the California Environmental Protection Agency and other state agencies look to the department for student interns, applicants for job openings, members for advisory committees and prospects for contract research. Obviously we do not look at the department as an administrative unit of the university and would leave decisions on how best to structure administration to the university. Our concern is to maintain the integrity of the academic department and continue its contribution as a resource to our profession. Thus I would support administrative options that maintain the department name and the control of department faculty over its academic programs.

Mari Golub: adjunct professor and Staff Toxicologist, Cal/EPA

Submitted on behalf of Gary Cherr, ETOX/NUT - Mary Delany (Mar 10, 2010 9:52 PM)

I wanted to provide my input based on the CPC report that came out March 5. It was quite clear to me that the CPC felt it was critical for ETX to maintain its current structure based on its uniqueness within the UC system and its national and international recognition (Option 1). Absorbing ETX into a large "environmental sciences" department (Option 3) would be a major mistake as environmental toxicology at UCD would would eventually be phased out as the larger proportion of faculty from other

departments who were merged would have the voting and political/financial power. It was clear that the CPC saw this option as a clear risk to ETX. While Option 2, merging with WFCB would be an advantage for WFCB, it is not clear what the financial advantage would be for the college (other than finding a home for WFCB faculty) or the programmatic opportunity would be.

Therefore, my preference would be for a new model which involves establishing strong divisions in which departments can cluster around. Administratively, chairs from the department can work together for the good of the division, with perhaps a rotating Divisional Chair. As long as all of the affiliated departments felt they had a real stake in the division, I could see a great collective being established. This would certainly save administrative $$ with clustering, yet maintain departmental independence and identity, which is the real fear of faculty. Frankly, unless identity is maintained, it is my view that there will be little if any faculty support for some of the options. Certainly this is true within my two departments (ETX & NUT), but also in others as I speak with colleagues.

Thank you for the opportunity to comment.

Sincerely, Gary
--
Gary N. Cherr, Ph.D.
Professor and Interim Director
Bodega Marine Laboratory
Departments of Environmental Toxicology and Nutrition

Maintain current structure - Robert Rice (Mar 11, 2010 11:42 AM)

Among the options listed for Environmental Toxicology (ETX), the first, to maintain our current structure, makes the most sense. The second option, to merge with WFCB is acceptable, although it is not clear that this would provide further benefit over the current ETX-WFCB administrative clustering, which is working well. Mergers with Nutrition or FS&T, proposed in those departmental drafts, provide little programmatic overlap or synergy in research or teaching. ETX and Nutrition are co-localized but share few resources beyond a common animal facility (which we are grateful to Nutrition for managing). Mergers driven by co-localization are far inferior to those with programmatic goals. Creation of a super-department with ETX joining LAWR, ESP and WFCB could be ok if each maintained its identity. This option, if pursued, would best be implemented as an equivalent to the strong divisional model. ETX faculty pursue overlapping research and teaching interests with numerous colleagues in other departments, including Nutrition, FS&T, LAWR and WFCB. We greatly value these associations, but the various possible merger scenarios seem unnecessary. To the extent that they detract from the ETX mission, they could be deleterious.

Bob Rice
Professor, Environmental Toxicology

ETX Chair Comments - Ronald Tjeerdema (Mar 11, 2010 12:44 PM)

Dear Colleagues:

We have reviewed the draft CPC report “College Departmental Organizational Options” and welcome this opportunity to provide additional comments. We recognize the draft represents a tremendous effort on the part of many of our colleagues, which is shown in its overall quality.

Like many, we view reorganization on three levels – divisional structure, administrative clustering, and departmental consolidation. There are clear benefits and costs to changes at each level. However, it makes logical sense in the current budgetary climate to reposition the College for the future, and thus we support a new divisional structure and administrative clustering. They bring

obvious benefits with minimal costs. In our view a departmental merger involving ETX would not provide a net benefit for the College due to a loss of external visibility and programmatic integrity. This consideration would likely apply to other departments as well. Instead, we would support the "strong divisional model" that has been proposed by several of our colleagues. Such divisions could simultaneously serve as administrative clusters while also providing the benefits of larger departments – centralized strategic planning and a platform for coordinating synergies in research, teaching and outreach. In essence, the model would provide the benefits of larger departments with few of the costs, and allow departments to continue as important disciplinary units.

For ETX, we agree with the first option – "maintain current structure." With 11 faculty members, ETX is the largest it has been since 1991. Over the past 20 years, while the College has been significantly larger than today, ETX ranged from only 6 to 9 faculty members. However, it has consistently maintained its excellence as described in the APC report. This has been reaffirmed by the draft CPC report, as the only weakness cited is that ETX does not meet the 12 faculty member minimum. However, similar successful programs elsewhere generally consist of only 8 to 10 faculty members. Therefore we do not view our current size, or that projected over the next 5 to 10 years, as a concern (as detailed in our departmental response letter). Conversely, both ETX and the College would benefit greatly by allowing faculty elsewhere with strong interests in environmental toxicology to realign with ETX if they so desire.

The second option – "align with WFCB" – while not a perfect situation, would provide for the strengthening of ecotoxicology and wildlife/aquatic toxicology within both programs. The third, "merge with ESP, LAWR and WFCB," would provide most of the same benefits as the "strong divisional model" – but also the key costs of loss of external visibility and programmatic integrity.

Other options for ETX to align that are listed for other departments are suboptimal and based on misconceptions. Being that ETX is highly multidisciplinary, only a few of our faculty members could directly or effectively contribute to any specific merger. Some clarifications:

- At most, 2 ETX faculty members possess disciplinary training similar to those in LAWR.
- Only about 2 ETX faculty members have interests similar to those in FST.
- While ETX shares 3 faculty members with NUT, 2 were recruited primarily to address a retention issue and thus represent minimal programmatic overlap.
- The main focus of ETX has been to address the fate and health impacts of chemicals of environmental importance. Targets consist of a wide variety of organisms, including humans. Thus, ETX views its main alignment as being with other environmental science programs.

We look forward to working with our colleagues to enhance the future vitality of our College. Thus, we believe that the "strong divisional model," with ETX maintaining its current departmental structure, provides the greatest number of benefits to the College with the fewest costs.

Best regards,

Ron Tjeerdema, Chair
Environmental Toxicology

Food Science and Technology

Forums / CPC 3-5-10 DRAFT Reports: CA&ES Departments - Strategic Options / Food Science and Technology Feedback

Chair's response - Jan Hopmans (Mar 11, 2010 1:15 PM)

Last Edited By Brenda Nakamoto on Mar 16, 2010 1:40 PM
Last Edited By Brenda Nakamoto on Mar 11, 2010 3:16 PM
Last Edited By Brenda Nakamoto on Mar 11, 2010 3:15 PM
Last Edited By Jan Hopmans on Mar 11, 2010 1:16 PM

CPC 3/5/10—J. Seiber Comments on Behalf of Department of Food Science and Technology

I comment on the 3/5/10 Draft of the CPC, both with a general comment and with specifics related to the component on Food Science and Technology (PP 16-18)

As a general comment, I am encouraged that CPC is considering other organizational models than 'maintain' and 'merge'. The word 'align' is seen in several places: CPC should define the meaning, and give thought to models, with examples, of 'alignments' that have worked and could be adapted to CAES departments/units.

One such alignment is a strong divisional model, in which departments/units (and possibly Graduate Groups—more input from this sector is desireable) with some commonalities in eg disciplines and resource needs, work together on issues of FTE allocation, teaching needs of their majors, resource sharing, research collaboration etc. As a department chair under this system in the past, I saw this model work well. The keys were leadership in the division, and support by the College.

I would suggest that CPC examine this model and see if it might achieve all, or most, of the goals occasioned by reduced faculty FTE, reduced budgets, and still maintain the elements of uniqueness, and dedication to 'applications of knowledge' that have served the College so well to date.

Comments on pp 16-18, Food Science and Technology

FST shares faculty with four other departments in three colleges (not just the two indicated on p16.) These are American Studies (AMS) (1faculty member), Nutrition (NUT) (1), Chemical Engineering and Materials Science (CEMS) (2), Biological and Agricultural Engineering (BAE) (5). This system has evolved over many years, although accelerated in recent years by the Foods for Health institute, without mergers. Mechanisms already exist to share, cross fertilize, and enrich programs.

Strategic Option 1

Under Strategic Option 1, which the FST faculty favor, I would emphasize the critical mass FST has in Food Safety, with four faculty working solely in that area and several others devoting significant time to it. We agree that this effort warrants future investment, and this would logically be made to complement the strength and national visibility FST supports in its existing FTE in this critical area.

Under Strategic Option 1, Weaknesses, we do not agree that the department would necessarily gain opportunities from being part of a larger unit. The department has created opportunities, exemplified by growth in its microbial food safety component, because it was flexible and able to follow up on opportunities—these qualities are size-independent.

Strategic Option 2

Under Strategic Option 2, we agree with the goal of strengthening programs in fermentation, food chemistry, sensory, and flavor sciences. The nucleus of these areas exists in the present FST faculty; we have strong, well recognized programs in brewing, and sensory sciences. Those strengths are augmented by close working relations with Viticulture and Enology faculty, well illustrated in sensory sciences where the two departments together have world-class expertise and now share new facilities in the Robert Mondavi Institute. It has already evolved. Merger offers no advantage.

FST has taken advantage of several cross-cutting programs, some of which were initiated by its own faculty: Working Group for Advanced Materials, Methods,and Processing (CAMMP); Foods for Health initiative (the director and four joint FFHI faculty reside in FST); Robert Mondavi Institute (FST is one of two founding departments, VEN is the other); California Institute of Food and Agricultural Research (CIFAR). FST also supports a graduate group in Food Science that has members from 6 departments besides FST. And it participates in the highly successful Milk Bioactives research program. Again, this has evolved without new departmental alignments.

Strategic Option 3

We are not aware that overlaps exist in core curricula between NUTR and FST, other than that FST offers an upper division courses in food chemistry that are required for Nutrition majors and that Nutrition majors can opt to take other courses offered by FST. This represents a sharing of resource rather than overlap.

We agree with the weaknesses cited for Academic Goal 3. CPC is encouraged to look at the experiences on other campuses as part of the college planning process. University of Massachusetts and MIT examples are relevant to the plusses and minuses of mergers of

Food Science with Nutrition /Dietetics.

Strategic Option 4

Under Goal 4, the strengths noted by aligning with ETX and TXC can be realized without merging. However, FST is open to assignment of part of the TXC faculty to FST if that department were eliminated. FST could not, however, support the T&C major with present faculty.

Strategic Option 5

Under Goal 5, we agree that the three departments, FST, VEN, and NUT, and possibly parts of ETX and TXC should work more closely together. A divisional structure would allow the strengths noted by CPC to be nourished—many arrangements already exist, including joint faculty FTE, alternate year offering of courses by faculty in two departments,.research collaboration through eg the Milk Bioactives program and sharing of some analytical resources.

I appreciate the openness of CPC in sharing the draft of its report, and encouraging input.

Comments on Options - Stephanie Dungan (Mar 11, 2010 5:03 PM)

My overarching concern with Options 2, 3 and 5 is that I think they offer a false panacea: merge programs and we can weather FTE losses due to retirement. This solution only works under two conditions, neither of which applies to Nutrition/FoodSci/V&E:

(1) The merged programs develop a new, blended mission that somehow combines the old. This approach only works, however, if the merging programs share sufficient commonality to create such a new vision. Food science and nutrition are just too distinct, albeit complementary, to create such a shared vision. Certainly they can and do collaborate on research, but only because they bring different things to the table that are fostered by a strong base in nutrition (a medical/physiological area) and food science (which draws on disciplines in the physical sciences and engineering, microbiological and sensory sciences). As we know well in Food Science, at some point multidisciplinary breadth is too difficult to sustain, because no one can understand in sufficient depth what they others in the team can do. The disciplinary backgrounds in Nutrition and Food Science are also too diverse to allow any significant cross-teaching, and the students we educate are employed in distinctly different industries.

The same argument would definitely apply to the viticulturalists in V&E--they do not fit into this merged "shared vision". V&E itself has a broad multidisciplinary vision that would have to be relinquished under any merger.

The "new" structures that are proposed here are not actually new at all--there are existing programs of nutrition/food science, and food science programs with a enology subgroup. These programs are not highly ranked, in large part for the reasons described above.

(2) The merged programs stop some of their core activities. This will be the real, perhaps unintended consequence of these proposed mergers, because the included units are too distinct and carry too large teaching loads to sustain these activities in the face of significant FTE reduction. Any

recommendation of mergers should confront this likelihood directly, and consider the desirability of losing strong V&E, Food Science or Nutrition programs on this campus.

The key is to address the Dean's charge in a strategic way. The Dean's stated goal was not to continue cutting back all programs equally, thus weakening everyone, but to stop doing certain things so that others may flourish. This would include increased FTE to targeted programs. This is my problem with options to merge NUT/FST/V&E--they do nothing to address the teaching components of those departments, nor the disparity of their research approaches. Thus these options do not help them absorb FTE losses: within a merged structure they will continue to be weakened by FTE losses, in addition to suffering the loss of effectiveness, visibility and ranking from existing in a more diffuse and unfocused unit. This is exactly the outcome the Dean wanted to avoid.

UC Davis College of Ag and Environmental Science is well-known because of strong individual departments. These individual departments are not simply "brands", they are driven by a coherent vision, that directs efforts to deliver research, hire faculty of intellectual quality, build effective majors, admit excellent graduate students. The excellence of the department is built on the coherence of the vision and the intellectual resources they have to pursue it. Certainly programs can become too small to deliver such a vision, but I do not think 15 faculty is anywhere near such a size. It is equally true that departments can be too large and diffuse to develop a shared vision.

Joint FST NUT VEN Response - Andrew Waterhouse (Mar 11, 2010 6:48 PM)

Last Edited By Brenda Nakamoto on Mar 12, 2010 9:43 AM

March 11, 2010

Dear CPC,

The Departments of Food Science and Technology, Nutrition, and Viticulture and Enology all feel that the plans to merge our programs in various manners could result in irreparable harm to our identities and our strong national and international standings. Each department has a distinguished reputation and has a well recognized "brand name." Any merger would greatly damage the value of that hard-earned name recognition, greatly diminishing our ability to connect with alumni and other potential supporters.

The faculty in each of these Departments has met and voted to support remaining separate and independent. It should be noted that we have long shared resources and have helped each other out when the need arose, helping cover classes and providing other assistance. The cuts we now anticipate will tax everyone's resources, but with cooperation guided by a careful planning to support our teaching programs, we are sure that we will be able to manage and still retain the value of our independent academic programs.

We appreciate the planning effort of the committee and while we feel our independence is critical, the possible linkages identified in the report has led to discussions that could build strength to the college and campus.

Andrew Waterhouse, Chair, Viticulture and Enology
Jim Seiber, Chair, Food Science and Technology
Francene Steinberg, Chair, Nutrition

Human and Community Development

Forums / CPC 3-5-10 DRAFT Reports: CA&ES Departments - Strategic Options / Human and Community Development Feedback

Professor of Human Development - L Harper (Mar 10, 2010 11:11 AM)

Integrating Landscape Architecture as a separate unit or integrated with CRD makes some sense. Maintaining the budgetary independence of the units within HCD is essential to sustain the variable--but considerable--contributions of the different majors. There is an underestimation of the potential contribution that HD can make to such other areas as Nutrition, Environmental Toxicology, and Landscape Architecture in terms of evaluating the effects of nutrients, toxicants, and settings on human health and behavior.

CHair's response - Human Development: Zhe Chen - Jan Hopmans (Mar 11, 2010 2:58 PM)

Last Edited By Brenda Nakamoto on Mar 11, 2010 3:18 PM
Last Edited By Jan Hopmans on Mar 11, 2010 2:59 PM

1. HCD supports the creation of the Human Ecology Division within the college.

2. HCD strongly supports Option 1: developing a three-unit department. The chairs and faculty of HD, CD, and LDA have been actively exploring the viability of this arrangement. Currently, four committees (research, outreach, graduate training, and undergraduate instruction) formed by faculty of the three units are working on a final draft report specifying their recommendations for the new three-unit department.

3. HCD faculty strongly believe that it is essential to maintain the entities/identities of Human Development and Community Development to continue to attract students and external funding to our programs.

4. Given the health and popularity of Community Development and Human Development majors, it does not make sense to dissolve any of these units.

5. Data Correction: We found several inconsistencies in the data listed in the CPC's draft report. Following, we provide the correct figures:

HCD Faculty: 17.6 FTE - 11 FTE in HD, 6.6 in CD.

HCD CE: 3 FTE - 2 FTE in HD (including one under recruitment), 1 in CD.

Undergraduate Majors - Fall 2009 (from "Students in Major Count 704").

HD: 467, CD: 195, IAD: 39

Graduate Students:

Human Dev./Child Dev. 46, Community Dev. 35

Land, Air and Water Resources

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Forums / CPC 3-5-10 DRAFT Reports: CA&ES Departments - Strategic Options / Land, Air and Water Resources Feedback

Planning Margin not explained in the draft CPC Report - Thomas Harter (Mar 6, 2010 3:19 PM)

I understand the need for smaller departments to merge and/or form administrative clusters to take advantage of the economics of scale in the administration of faculty and students.

I remain unconvinced that merging larger departments (e.g., LAWR and ESP or LAWR and BAE) is in any way cost-effective (above and beyond possibly sharing administrative clusters) or leads to improved academic strength within a reduced-size college. As expressed in some department's summary, we already collaborate extensively across departments and colleges for research grants, centers, graduate groups, and undergraduate majors. These venues of collaboration and creating synergies to meet research and teaching demands will continue to be our way of doing business, regardless of department structure.

By the same token one may argue that a few super-sized departments would not be in the way of these existing collaborations and our way of doing day-to-day business. That is true, but it comes close to a model of administering the entire college from within the dean's office. Ideally, we operate within a balance between college identity (and size), department identity (and size), and individual faculty program identity. Given the size of the future college (300 faculty), a target of 10 departments sized around 30 faculty seems to be just about the right balance.

More important is the question of how we focus our research and teaching agenda in a reduced-sized college. **I do not understand how we have any planning flexibility**. The random attrition by retirement seems to dictate our program in five years: From the APC report, it appears that the number of college-wide faculty born after 1950 (more than 5 years from their theoretical retirement age) is nearly the same as the future size of the college (APC identified nearly 25% of the faculty as being 60 and over).

II suggest the CPC Report clearly identify - by current department - the planning margin or "wiggle-room" that the college has in actually planning its academic foci within the next five years. My suggestion is to ue the difference between column four (speculative) and column five (someone please fill this one in) in the Table below (collected from the APC and CPC data) to illustrate that point:

Dept	Current Faculty	APC Recom.	Reduced Faculty (80% of current)	Total Faculty born 1950 or later	Under-grads	Grads
ARE	30	stable	24		850	90
ANS	35	stable	28		840	73
BAE	18	stable	14		140	28
ENT	21	stable	17		22	35
ESP	21	stable	17		330	78
ETOX	11	high risk	9		80	12
FST	20	high risk	16		190	51
HCD	18	high risk	14		620	77
LAWR	33	stable	26		240	82

LDA	8	redistribute	6	180	23
NEM	7	redistribute	6	240	7
NUT	16	high risk	13	550	76
PP	19	stable	15	-	39
PS	80	stable	64	330	155
TXC	5	redistribute	4	90	12
VEN	14	high risk	11	100	42
WFCB	10	high risk	8	150	48
TOTAL	366		293	4950	928

(joint appointments and joint majors may be counted multiple times)

Link between LAWR and Plant Pathology - M Silk (Mar 8, 2010 12:20 PM)

I would like to explore the possibility of linking LAWR to the Plant Pathology / Nematology cluster. We have strong links to the SAS teaching program and would be strengthened by the addition of a biotic component to our Natural Resources research program.

6 comments opposed to LAWR seeking mergers - Richard Grotjahn (Mar 10, 2010 11:58 AM)

Thank you for the opportunity to comment on the CPC draft report. I believe the CPC has made a very good effort at a very difficult task. I did not want to speak for other departments, so most of my comments below are narrowly focused on LAWR.

-

1. LAWR's size is above the future threshold: 19 -20% = ~15. We are not *required* to merge. I have read that the Dean's office would not support programs that don't merge, but I assume that applies to programs below the threshold and not to LAWR maintaining its current mix.

-

2. LAWR has already done such a merger of different disciplines. Most meteorology/atmospheric science programs around the country are stand alone departments. ALL of the top programs are stand alone. Atmospheric science would be even more hidden from view in a broad earth science major than it is now. The merger has harmed the atmospheric science program's visibility. I don't know about hydrologic science on a national basis, but I'm guessing that similar comments might apply for that discipline. Hydrology (at UCD) also has the importance of being unique in the UC system. So this additional amalgamation should not be generated from within LAWR.

-

3. The reasons in favor of some of the mergers suggested for LAWR seem like wishful thinking ('it could provide opportunities for synergies') whereas the arguments against seem more concrete (high 'transaction' (realignment?) costs, burdensome M&P, smaller disciplines lose their identity, etc.). Hence I don't see a compelling benefit but I do see lost productivity due to a major upheaval and a direct threat to the viability of some of our 'small' but crucial majors.

-

4. I see that Prof. Silk is supporting a merger with nematology, and states SAS as a prime reason. I am unconvinced and at this stage I disagree with that idea. (Sorry Wendy!)

-

5. I see in some of the discussions that trying to perform such mergers might lead to an existing department splitting its faculty since individuals would align better with different departments (e.g.

some WFCB with Animal Science, some WFCB with LAWR or ESP). This is a way in which mergers accomplish the opposite of 'synergy' but lead to less than before.
-
6. I see that some people seem to favor certain mergers (in comments under other departments). It is unclear yet how widely shared those specific views are for the related faculty. Presumably the departmental meetings will assess the level of agreement (or not). If that is not the intent, I'd encourage the CPC to identify (say, with departmental voting) how many in a given department support a particular merger. It would be counter productive and generate much animosity to proceed if the faculty were polarized or evenly split.
-
Regards,
Richard Grotjahn

Re: Some comments on the draft report and the unclear CAES vision for the future - Richard Grotjahn (Mar 11, 2010 11:10 AM)

Last Edited By Brenda Nakamoto on Mar 11, 2010 3:21 PM
Prof. Paw U makes some excellent points:

1. CPC has done commendable work. Broad issues need further discussion.

2. Academics and research are the issues here (not administrative savings). Given shared administration, 12 is not necessarily a minimum size.

3. Larger departments erode faculty representation in the Dean's Office.

4. Larger departments mask our diversity of expertise, a core CA&ES strength. (This point is made by several commentators in other departments.)

5. Putting a small group with a larger group in one department does not increase the ability of the small group to weather retirement attrition - more likely the opposite.

6. The shift from emphasizing SCH to emphasizing numbers of majors ignores the critical need for expertise in some key areas, even if student numbers are low.

7. Expertise matters. Interdisciplinary work is best when experts who are each masters in a discipline interact, not when 'multi-disciplinary' trained people (generalists, but master in nothing) team up. Doubt that? Proposals to federal agencies are less successful without disciplinary expertise.

8. Are courses adequately covered during sabbatical leaves in a downsizing that encourages 'multi-disciplinary' generalists?

9. Environmental sciences should not be limited to agricultural issues.

Generally, I agree with his points.

some comments on CAES vision - Kyaw Paw U (Mar 11, 2010 10:59 AM)

Last Edited By Brenda Nakamoto on Mar 11, 2010 4:17 PM

I commend the cpc for their hard and lengthy work, this is a almost thankless job with few rewards. The Associate Deans must also be thanked for their extraordinary efforts in devoting time to this endeavor.

There were some things that were missing from the report, possibly because of the short time frame to cover so many issues, and the administration pressure to coalesce departments. I want to make clear that these comments have little to do with "retrenchment," but represent a level-headed attempt to consider what should be done.

The major objectives of how the college should look in a decade appear missing in action. Perhaps in

a fuller version of the report we will be privy to this information, but the version we were shown has little about this. Unfortunately, the future CAES vision is critical to determining individual visions of the departments and their faculty. As Senate faculty, we are handicapped in an analysis in light of these missing visions.

That said, one apparent objective is to shrink the number of departments, ostensibly by combining faculties as FTE replacements are predicted to be a small percentage of retirements. The justification for this is not entirely clear. While the department faculties will clearly shrink under the shrinking FTE scenario, an analysis of educational institutions across the country would reveal scores of smaller colleges and universities with small departments and small majors. The issue of higher tuition for these aforementioned schools is becoming less of an issue as the UC tuition and fees increase and start to approach the lower values some private schools. Our viewpoint seems warped by the perspective of being a large state institution. So, the question then arises, why is it necessary to coalesce departments as they shrink? The stated minimum size is probably too large, although obviously at some minimum number, discipline specific, a department might be considered not viable. What are these sizes, with reference to the national scene including both sister public institutions, and smaller private ones?

The economy of scale for administrative purposes has already been planned by the Dean for the administrative parts of departments, so the comments here should be confined to the issue of academics and research. Also, we should remember, then, that the objectives for any combination of departments should be only in regards to academic objectives, whether they be teaching or research related. So, then, did any of the departments' recent plans pre-budget crunch mention a strong wish to consolidate based on academic reasons? Which ones?

Evidence from larger departments, for example, Plant Sciences and LAWR, indicates a diminished morale but no apparent actual improved measureable outcomes including measures of increased international, national, or state prominence, since their mergers, one decades ago, and the other more recently, for at least some of the disciplines within the larger whole. Other disciplines might have maintained success within the departments. This is despite the usage of extra FTE's as incentives in the case of Plant Sciences. In this case for the future, some departments, if they drop below some minimum FTE, will have to disperse their faculty into other departments, but potentially this will generally be into more than one department, so that in this scenario, the departments are not merging, but faculty in those endangered species are being dispersed into other extant habitats.

A potential negative aspect of mergers is not discussed in sufficient depth in the CPC draft report. That is the issue of faculty representation to the Dean's office. The fewer the number of departments, the fewer the number of chairs representing the faculty to the Dean's office. Although if one is to maintain the same faculty:chair ratio, as FTE decrease, then some decrease in the chair number would also be appropriate, the draft report does not appear to address this in sufficient detail. It is of great importance for each faculty member to have good representation to the Dean's office, and having megadepartments could greatly diminish this formal channel's effectiveness. The administrative structure could then become excessively removed from the rank-and-file faculty, losing touch with the reality of the rank-and-file situation. A 20% reduction in faculty would translate to a 20% loss in departments and chairs, to maintain the faculty:chair ratio; this issue does not imply completely unchanged departmental structure, but is one whose metrics should be discussed for each department's scenario .

Some discussion has occurred that smaller department's disciplines would be furthered by combining with larger departments because they would be more likely to garner scarce FTE replacements through the larger department receiving an FTE or two. This must be tempered by the likelihood that the majority discipline of the megadepartment will tend to rule, so the minority discipline will still be likely to not receive any FTE in their area. On the other hand, despite the differences in departmental size, having two chairs, one from a large department and one from a small department, present their cases to the Dean's office, slightly enhances the chance of the small department for that FTE (similar to the powers of small states in the US Senate), compared to the vote within the megadepartment .

A confusing thing to the faculty is the sudden change from the emphasis of Student Credit Hours (SCH) to the current message of number of students in a major. This metric is problematic, and is

antithetical to the goals of free academia. It is related to the concept of "big-box" education/cookie-cutter corporate model of academic management. The reputation of CAES and UCDavis will undoubtedly drop if we acquiesce to big-box education. Our College and the campus used to boast about the large number of majors it had, advertising the academic diversity. Now it appears to have done an about-face, condemning academic diversity. One might argue that in the face of massive budget cuts, there is no choice regarding decreased academic diversity, if one is going to maintain quality. On the other hand, mass mergers into megadepartments with diffuse topical commonalities or imposed and imaginary inter-disciplinary linkages are likely to decrease the college's reputation and world-renown than increase it. Sure, as the knowledge base of academia increases exponentially, more linkages will naturally be required; but this implies imbedded multi-disciplinary faculty to facilitate interdisciplinary activities, mixed in with world-renowned, traditionally focused disciplinary excellence. Academic reputation has continued to be linked to outstanding performance and focus on relatively conventional disciplines, with the interdisciplinary foci still perceived as populated by academics who know a little about many areas, but are less able to further specific advances and knowledge production in any particular area (Name (you pick) of all trades, but master of none).

One good metric for departmental structures is that a substantial number of faculty in the department should be able to teach any of a substantial number of the courses offered by the department. Such a situation is needed for sabbaticals and other leaves for course coverage and efficient academic administration of courses, but also represents the natural reasons for the local academic community of a department. The megadepartment structure distances the Chairs from their faculty further, decreasing their ability to understand who can cover for whom, while at the same time also decreasing the overall ability of any particular faculty member to cover departmental curricula.

A major issue, related to the lack of a vision for the future CAES in the draft report , is no cogent consideration of the plight of environmental studies within the CAES. Environmental sciences contain many threads virtually completely removed from agricultural aspects, and yet most of the foci of the CAES have seemed to be agricultural or environment as related to agriculture. One might say that the AES connection formally applies this constraint, but this is not valid for two reasons. (1) the AES, despite its formal name, has a mission that features environmental issues including those separated from agriculture, and (2) The AES component for CAES faculty has dropped and in the next 10 years or more, and will probably continue to drop. With this in mind, the draft report vision for the CAES must include this change; this very change is one of the justifications sometimes given for the emphasis on either increases of SCH (previously) and now number of students in a major (more recently emphasized metrics) , that I&R is increasingly important.

Therefore, solutions to giving the environmental aspect of the CAES more prominence in the future must be addressed. The increasing industrialization of the world, and the inexorable path to decreased rural and agricultural influence on the socioeconomic politics of the state, nation and world, necessitates an increase in environmental studies, with many aspects completely separate from agriculture. A clearly separate division, or Bren-School like situation might be one more radical and novel solution, but it's hard to tell as none of the advantages and disadvantages of such change is discussed in the draft. This type, or any other form of restructuring that gives the environmental studies disciplines equal emphasis to agricultural disciplines, is critical in determining how the faculty distribution and departmental structures might be in a revitalized CAES of the future within the context of the budget cuts. The current draft report does not portray much of a change in CAES academic goals, it appears more focused on individual departments, with the assumption of consolidation is necessary, within the old academic framework of the CAES.

Also, the draft does not discuss important potential structural linkages with other colleges on campus; perhaps individual faculty, sub-department disciplinary groups, or departments would better fit in other colleges; and perhaps increased inter-college teaching and research is needed with budgetary declines, consolidating courses with similar curricula for overall campus efficiency.

Extramural funding is a clearly emphasized issue from the new Chancellor and the Dean. This funding will be increasingly related to environmental issues such as climate change and water use, and the CAES will lag behind sister UC campuses and other universities if it does not recognize this future scenario; this will further increase the budget woes if we cannot effectively tap into the increased

funding opportunities. The potential structural changes of departments must address the extramural funding outlook as honestly as possible.

Re: some comments on CAES vision amended version reduced metacode? - Richard Grotjahn (Mar 11, 2010 11:26 AM)

I agree with most of Kyaw Tha's points. I would summarize them as:

1. CPC has done commendable work. Broad issues need further discussion.

2. Academics and research are the issues here (not administrative savings). Given shared administration, 12 faculty is not necessarily a minimum size.

3. Larger departments erode faculty representation in the Dean's Office.

4. Larger departments masks a core strength of CA&ES: our diversity of expertise. (Several others on the forum have made this point, too.)

5. Pairing a small group of faculty with a larger group in one department does not increase the ability of the small group to weather retirement attrition. The opposite is more likely and has occurred.

6. The shift from emphasizing SCH to emphasizing numbers of majors ignores the critical need for expertise in some fields, even if the student numbers happen to be low.

7. Expertise matters in other ways. Interdisciplinary work is best accomplished when experts who have each mastered a discipline interact and NOT when generalists (but masters in nothing) team up. Doubt that? Consider a proposal to a federal agency, without disciplinary expertise, those are less successful.

8. Are courses adequately covered during sabbatical leaves in a downsizing that encourages generalists, or in a very large department whose chair no long truly understands all the disciplines within that department?

9. Environmental sciences will continue to increase in importance and its study should not be limited to agricultural issues.

This, I believe - Gregory Pasternack (Mar 11, 2010 4:58 PM)

I have long believed that many aspects of the structure and function of CA&ES would be well served by change. At the individual level, faculty need to strive harder to achieve excellence, staff need a better understanding of the academic nature of the work of faculty and students, and administrators need to create inspiring vision backed by leadership through example. At the departmental administrative level, resources are used inefficiently, because neither faculty nor staff are trained in project management theory and practice. Also, communication is lacking and actions are not sufficiently transparent. At a departmental academic planning level, broad-based and equitable teamwork do not exist, faculty abhor service, and students have inadequate representation. Meanwhile, research and outreach within departments is not coordinated and does not achieve broad, holistic goals. At the college level, there is no coordinate or vision for outreach. Also, a cacophony of majors and minors, programs, institutes, centers, and departments is befuddling to students and outsiders. Staff advisors disparage other majors and behave selfishly to protect their turf. Students can earn B.S. degree without ever taking the normal suite of fundamental courses in physics, chemistry, math, and biology. There is no systemic marketing to bring in the best of the best

students to feed our elite programs with diversity from around California, the nation, and beyond. In terms of faculty hiring, core disciplines have been allowed to erode, while growth initiatives have received minimal performance evaluation despite having absorbed significant resources. The faculty rank structure of the college is shocking and completely unsustainable. The small number of mid-career and junior faculty have little possibility of bringing about beneficial academic change by rising to leadership on the basis of merit. At the university level, gradate groups are a complete mess. The disparity in participation and performance is amazing. There is totally inadequate accountability. So if I am asked if CA&ES is in need of change, I would say yes. Yes it is.

Unfortunately, I also believe that the ideas put forward for restructuring CA&ES largely just play mosh-pit musical chairs with the components to little effect and do not promote beneficial academic change to address the underlying challenges facing the future of CA&ES. The majority of examples of shuffling people and cultures around throughout human history demonstrates that they cause conflict and harm. Mass genocide, injustice, and terrorism are the outcomes of these shuffles at a societal scale. Coming down to the corporate or university level, there are also many examples of failure from broad mergers mashing disparate parts. You only have to look at the state of the college's large LAWR and Plant Sciences departments to see that mere proximity fails to yield the mythical "synergism" that the CPC dreams of. Given a reward system that only recognizes achievement at the individual level, the underlying pressure guiding individual faculty behavior is largely to balkanize and divide down to the level of small teams and individual Michael Jordans where merits and promotions may abound. What reward comes to a great major or large collaborative research program? Without changes to the driving motivations, regrouping faculty and crushing smallness will simply be met with a round of vigor to re-create more small things again. Vice-chairs, tracks within major, committees. It does not work.

After two paragraphs of a strongly negative assessment, what some on the CPC deride as mere "venting", I do have positive ideas that I bring as an alternative vision. Yes, resources are declining. Yes, some departments are mortally wounded by retirements now and all will be in 10-15 years. Action is required. Here is my plan.

Step 1. Triage. Stop the academic carnage by abolishing the departments that are critically wounded in the sense that they will have less than 5 faculty remaining in the next 3 years. Residual faculty should be granted pots of money and then they and their monies should be competed for among departments. This will motivate departments and enable these individuals to drive their own destiny. It will foster create activity and in the end people will bear the responsibility of their choices rather than have some larger hand to blame.

Step 2. Train. Institute comprehensive project management training for faculty and staff. In all aspects of college activity, massive resources are being lost because people have no idea how to manage resources. After training, institute performance metrics that track financial capability and then require supplemental training as needed for those performing poorly.

Step 3. Evaluation. Until the recent planning process and apart from undergraduate major reviews, units in CA&ES go largely unevaluated. The merits and promotions process fails to assess units as a whole. In the face of a major crisis, we lack the necessary information to guide rational planning, because performance is not being measured. This is not rocket science. Get it going.

Step 4. Referendum. Use a transparent and democratic process involving voting via direct democracy by faculty with some proportional representation of students to pick which majors and departments are the priorities for survival and even growth. In addition, I would grant the dean's office the discretion to add an additional 3 units to that list. No matter what I think the priorities are as an individual or what the CPC thinks, ultimately the People will have to implement the plan. They will only do what they believe in and are motivated to do. Prior to voting, bring out all information and metrics that exists on units, have public debates, go through a meaningful public discourse.

Step 5. Flexibility. I do not believe that anyone knows what the situation is going to look like for CA&ES in 5 years form now, let alone 10 or more. Even as bold steps are taken to move forward, continue to be introspective and allow new ideas to emerge.

Good luck to you.

Landscape Architecture

Forums / CPC 3-5-10 DRAFT Reports: CA&ES Departments - Strategic Options / Landscape Architecture Feedback

Urban Horticulture and Landscape Architecture - David Burger (Mar 8, 2010 10:51 AM)

Just wondering whether it might be time to put those faculty interested in urban horticulture and landscape architecture together? There may be faculty in Plant Sciences (and maybe other departments???) who would be interested in forming a unit along with Landscape Architecture faculty. My concern is that the area of urban horticulture may not be well-supported within the Plant Sciences as retirements occur over the next 5-10 years. A unit such as this would be inter-disciplinary involving the biological, sociological and physical sciences. There are already close ties between the majors in Environmental Horticulture and Urban Forestry and Landscape Architecture. In fact, may LDA students select the Environmental Horticulture Minor. It's known that "urban horticulture" is an area of study that directly relates to the growing urban population of the U.S.

Nematology

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Forums / CPC 3-5-10 DRAFT Reports: CA&ES Departments - Strategic Options / Nematology Feedback

Where is the consideration of UG teaching? - Steven Nadler (Mar 8, 2010 4:27 PM)

One thing that I note about the draft report is that there is much lacking about impact on undergraduate programs/majors. I have two points to make in this regard. First, we have already heard that the College cannot continue to support 37 undergraduate majors with the pending faculty reductions. Which majors will remain? This really needs to be determined before mergers of departments and other reorganizations can be planned. Similarly, the College needs to clarify if all future departments will have responsibility for one or more (viable) undergraduate majors. My understanding is that there has been some discussion of what minimum size (number of declared undergrads) should be required for a major to continue. Perhaps the CPC should outline some options for evaluating how existing UG majors might be evaluated and explore the impact of eliminating majors that do not fit the criteria. I understand that UG teaching and majors are considered to be the responsibility of the faculty. Nevertheless, if the College decides not to provide the necessary FTE (sufficient FTE target) to support a department into the future, this will certainly have the effect (intended or unintended) of changing what majors can be maintained.

In my view, settling these issues surrounding UG majors is prerequisite to meaningful planning for departmental mergers or consideration of new departments -- at least under a model where roughly equivalent UG teaching responsibilities of departments is deemed desirable. There has been much emphasis in the recent past about how I&R is the justification for future faculty positions, so at least it would appear that teaching justifications will remain important. - **(posted by S. Nadler w/o input from other Nem faculty)**.

Re: Where is the consideration of UG teaching? - Brian Todd (Mar 12, 2010 8:29 AM)

I have to agree with Steve.

If we look to the recent upheaval at UN-Reno, who face a similar budgetary crisis and restructuring, it is clear that their decision-making process has heavily focused on an evaluation of undergraduate majors. Those departments with the largest majors and consistently highest enrollment were targeted for preservation. Here in the UC system, I have been surprised by the nearly complete absence of such considerations in our college calculus. When one considers that (sometimes vocal) taxpayers often perceive our professorial role as that of educators for the state's university attendees, it would seem to be poor planning to not ensure preservation of our most vital degree programs. In other words, shouldn't undergraduate participation and enrollment be a greater factor in the calculus of which departments should be preserved and facilitated moving forward?

-Brian

Nematology Faculty Response - Steven Nadler (Mar 10, 2010 1:47 PM)

The draft report put forward by the CPC includes options for Nematology that our faculty have been discussing for some time, in fact, prior to the formal recommendation to eliminate our department. Our faculty believe that the proposal to eliminate Nematology is very hard to reconcile with the critical agricultural importance of nematodes here in California and elsewhere. In CA, more stringent restrictions on the use of fumigants and other nematicides is only going to increase demand for applied and basic nematology research in the future. There is mention in the CPC draft report of the

potential "decimation" of certain programs that might occur. This is the likely fate for Nematology research programs under all the scenarios outlined except one wherein sufficient FTE is allocated to permit the maintenance of a comprehensive research focus (regardless of department structure). Much has been said about how the College needs to maintain its uniqueness -- e.g., what differentiates us from CBS? Well, the presence of unique research programs with an applied focus is something that has set us apart. This applies to other departments that are also recommended for elimination.

One of our faculty members put it this way:

"Although demographically challenged since its inception, the Department of Nematology is world renowned as a center of excellence. Given its past history, the odds are it would continue in this mode if permitted to continue to exist. Although the Department has been proactive in seeking to merge with another department, the odds are that a merger would work against it continuing to be a center of excellence, and that demographically the discipline of Nematology on this campus will cease to exist once its current faculty retires. "

NEM faculty that I have spoken to also agree with my previous comments about teaching programs (see previous post for details), that is, settling issues concerning UG majors (what size is viable? is a major required for all departments?) is prerequisite to meaningful planning for departmental mergers or consideration of new departments. Clearly, an understanding of teaching priorities is essential in order to plan for teaching programs under new departmental structures. There are majors that could be expanded to serve AES students. For example, the successful Animal Biology major (now approaching 300 students) could be renamed and revised to include more disciplines -- the name "Experimental Biology" has already been discussed in this context.

Both Plant Pathology and Entomology have been suggested as potential "partners" for Nematology in the CPC document. The consensus of our faculty is that of these two choices, PLP provides the best fit, even though some of our faculty do not currently investigate plant parasitism (and have no intention of shifting their research focus). On the other hand, our faculty also recognize that what is best for our existing faculty may not necessarily be optimal as a long-term solution (or best for the College). In that respect, several of our faculty have indicated that they think a combined department that includes Nematology, Plant Pathology and Entomology may be best, although clearly there would appear to be more potential pitfalls to developing the vision (and working out the details) for such an arrangement.

Bottom line - Committees such as the CPC and the College need to understand and accept that elimination of small departments is going to profoundly affect the research programs that have contributed to the uniqueness and excellence of our College. Our College has decided that large departments of excellence can be maintained but small departments of excellence cannot, but this cannot be rationalized based on the need for the research provided by the disciplines involved. It is not clear how research programs like ours can be maintained over time following department mergers.

Steve Nadler (on behalf of the Nematology faculty)

Nutrition

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Forums / CPC 3-5-10 DRAFT Reports: CA&ES Departments - Strategic Options / Nutrition Feedback

Maintaining the Visability of the Discipline of Nutrition - Charles Hess (Mar 11, 2010 12:29 PM)

Last Edited By Brenda Nakamoto on Mar 11, 2010 4:14 PM
It is essential to keep the discipline, if not the Department of Nutrition, as a visible entity in the College of Agricultural and Environmental Sciences (CA&ES). CA&ES has always been relevant to societal needs. At this point in time, when good nutrition is a high priority for the public, we must not fail to meet the public's interest. Obesity and other chronic diseases can be addressed through good nutrition and diet. The ability to modify foods to increase those components that contribute to good health provides an important opportunity to reduce health care costs and at the same time add to the value of California commodities. California commodities are a major source of good nutrition and health for the nation. By adding value to California commodities, nutrition research can directly benefit California agriculture and make it more competitive in the national and international market place. A viable and competitive agriculture can help California's economic recovery.

It is important to maintain the visibility of the discipline of nutrition to continue to attract students, research funds, and our relationship with professional societies. It is equally important that the public and the legislature know there is nutrition research, teaching, and outreach at UC Davis.

There certainly are potential affiliations with Food Science and Technology and Environmental Toxicology. There are already four joint appointments between Nutrition and the two departments. In the past there was an appointment in Human Development, Ernesto Pollitt, who was also associated with the Department of Nutrition. There has been discussion about a divisional structure that could enhance the connections that already exist and facilitate collaboration among research, teaching, and outreach. This arrangement would maintain the visibility of the disciplines that are the foundation of the departments and keep the relationship with students, professional societies and stakeholders.

Also, we must recognize the synergistic relationship that exists between the Department of Nutrition and the Western Human Nutrition and Research Center (WHNRC) one of five such Centers in the nation. WHNRC would not be at UC Davis except for the strength of nutrition on the UC Davis campus.

The need for the discipline of nutrition will grow in the future with the development of the School of Nursing and eventually with the School of Public Health. There has been a strong relationship between the Department of Nutrition and the Schools of Medicine and Veterinary Medicine which should be enhanced for the mutual benefit of everyone.

Charles E. Hess
Professor and Dean Emeritus
Past Chair, Department of Nutrition

Joint FST NUT VEN Response - Andrew Waterhouse (Mar 11, 2010 6:49 PM)

Last Edited By Brenda Nakamoto on Mar 12, 2010 9:46 AM

March 11, 2010

Dear CPC,

The Departments of Food Science and Technology, Nutrition, and Viticulture and Enology all feel that the plans to merge our programs in various manners could result in irreparable harm to our identities and our strong national and international standings. Each department has a distinguished reputation and has a well recognized "brand name." Any merger would greatly damage the value of that hard-earned name recognition, greatly diminishing our ability to connect with alumni and other potential supporters.

The faculty in each of these Departments has met and voted to support remaining separate and independent. It should be noted that we have long shared resources and have helped each other out when the need arose, helping cover classes and providing other assistance. The cuts we now anticipate will tax everyone's resources, but with cooperation guided by a careful planning to support our teaching programs, we are sure that we will be able to manage and still retain the value of our independent academic programs.

We appreciate the planning effort of the committee and while we feel our independence is critical, the possible linkages identified in the report has led to discussions that could build strength to the college and campus.

Andrew Waterhouse, Chair, Viticulture and Enology
Jim Seiber, Chair, Food Science and Technology
Francene Steinberg, Chair, Nutrition

Department response - by F. Steinberg - Francene Steinberg (Mar 11, 2010 7:21 PM)

Comments on CPC draft report of 3/5/2010 – by F. Steinberg on behalf of the Department of Nutrition

We appreciate the opportunity to respond to the CPC report. The department is unanimous in favoring option # 1 “Maintain existing structure” as opposed to the other options involving full departmental merger with various partner departments. We feel that the goals and mission of the nutrition department and by extension, that of the college and university, are best achieved through our ability to maintain the discipline and hopefully the department of nutrition independent. In response to the identified weakness for this option as stated in the CPC report “loss of opportunities for synergies with other units in the college…” – there already exist many synergies currently in place with other departments (FST, VE, ETOX, HD, ARE, etc.) in terms of programmatic CE outreach, research, joint appointments, and some teaching. We look forward to continuing those and in fact expanding our collaborative activities as we establish effective strategies to meet the challenges of diminished FTE and financial resources.

The other options (#2-5) each involve merger with one or multiple departments. We recognize that each of the potential partner departments provides some strength, but there do not appear to be substantial benefits to the programmatic thrust, research or teaching activities of the nutrition department beyond what can currently be accomplished by our collaborations which would justify such a merger. In particular, impacts of loss of FTE on teaching nutrition curriculum would not be significantly ameliorated by merger with other departments, as the faculty expertise within various disciplines does not overlap to a large extent. Indeed, we feel that full departmental mergers would result in dilution and loss of focus to the disciplines, and consequently loss of value and visibility to the college and various stakeholders.

If the CPC must recommend sweeping organizational changes to all departments, then we encourage the CPC to consider alternative organizational models, focusing either on a strong divisional model based on administrative clustering and programmatic themes, or on building groups with disciplinary strengths rather than strictly on existing departmental lines. While there are no “perfect” matches between the nutrition department and other departments, there are complementary aspects that harmonize well with the discipline of nutrition – such as food safety, foods for health, metabolism, analytical food and toxicant chemistry, human development and health, as well as others. We would welcome opportunities to explore ways to further strengthen the discipline of nutrition, increase the

synergies that currently exist and add benefit to our ability to carry out the mission of the nutrition department.

We do agree that the Department of Nutrition aligns strongly with both the Ag & Food Systems and the Human Ecology programmatic areas. We are critical to the future success of many aspects of not only the CAES mission, but growing areas of the entire campus such as the Nursing school and the global One Health initiative. A strong Nutrition and Health program within the CAES is a priority for the public good.

A point of correction to the draft report – pg 28: Nutrition currently shares 3 joint appointments with ETX and 1 with FST.

Plant Pathology

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Forums / CPC 3-5-10 DRAFT Reports: CA&ES Departments - Strategic Options / Plant Pathology Feedback

Plant Pathology Department response - Thomas Gordon (Mar 11, 2010 10:12 PM)

On behalf of my colleagues, I offer the following assessment of the strategic options presented in the draft report on the Department of Plant Pathology. We are comfortable with both option #1, retain the current structure of the department, and option #2, merge with Nematology. Option #3, merge with Entomology and Nematology is not acceptable. Such a unit would lack a clear academic focus and the combination would likely diminish the visibility and ultimately the coherence of all three disciplines. Option #4 is also unacceptable. The submersion of plant pathology into an already large Plant Sciences Department would offer no obvious benefit to our faculty. On the other hand, a subset of the Plant Sciences faculty has interests in host-parasite interactions and would fit very well within our department. Although we do not see the present departmental structure as posing any barrier to our continued collaborations with Plant Sciences faculty members, we would welcome the opportunity to consider any of them as possible additions to an expanded Department of Plant Pathology and Nematology.

Submitted by Tom Gordon, Department Chair

Plant Sciences

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Forums / CPC 3-5-10 DRAFT Reports: CA&ES Departments - Strategic Options / Plant Sciences Feedback

Posted on behalf of Mel George - Mary Delany (Mar 12, 2010 6:32 AM)

Mary, I reviewed the CAES planning report. I think you did a thorough job of reviewing potential department alignments for the future. I would not favor separating the ecosystem group in plant sciences away from the rest of the department. For most of my career the former Agronomy and Range Science Department and the current Plant Sciences Department have felt that it is important to keep those working in agriculture mixed with those working on the environment so that they could influence each other and 1) keep sensitive to environmental issues and 2) keep ecosystems working with ag and not off on their own environmental agenda.

Melvin George
Extension Rangeland Management Specialist
Plant Sciences Department

CPC Reply Report - Chris van Kessel Comment - Brenda Nakamoto (Mar 12, 2010 8:48 AM)

Last Edited By Brenda Nakamoto on Mar 12, 2010 8:48 AM
The following is largely a synopsis of a meeting held in Plant Sciences by the Executive Council plus additional faculty members to develop a response to the draft report of the CAP Committee.

Throughout the draft report the concept of creating a new department along the lines of environmental science and natural resources and another one based on plant (ag) productivity appears to be promoted. A cautionary approach is very much required here. The key question that must be asked first is where the programmatic fields of environmental science and plant biology and production will be in the nearby future. Increasingly programmatic questions in environmental and applied plant biology will require an interdisciplinary approach rather than a disciplinary one. Strength in interdisciplinary activities arrives when basic scientific discoveries in genetics and molecular biology are fully implemented by applied plant biologists and ecologists solving issues on crop production and ecological management. Many issues in plant production have also an environmental dimension and require attention across disciplines. Creating a new disciplinary based department and splitting up the environmental issues from the applied plant biology and production would be a big step backward, counterproductive, and detrimental to the future of the College. Furthermore, granting agencies are increasingly looking for interdisciplinary, integrated research projects, not disciplinary focused ones.

The strength of the CA&ES is driven by the integration of environmental science with agricultural science and what makes this College unique in the UC system. By creating a department of environmental science and one on plant (ag) productivity, this uniqueness will be lost with potential severe consequences. Over time it is likely to evolve into a Department of I&R (Democrats?) and a Department of AES (Republicans?). In due course the Department of Environmental Sciences at UCD will not be distinguishable anymore from the Department of Environmental Sciences at UCSB or UCI. That begs the question why does the Department of Environmental Sciences at UCD have access to AES funding and resources whereas UCSB and UCI do not? Only the integration of environmental sciences with applied plant biology and production can avoid this debate and request for AES resources by other campuses, which by the way, are all part of the Land Grant system. Keep in mind that about 60 % of the College funding is still AES funding.

There are advantages of being part of a larger department. Clearly a large department as Plant Sciences has its own challenges as we are located in 7 buildings, faculty may not know each other as well compared to a small department and likely a few more disadvantages can be added

here. However, it also provides opportunities that do not exist or are more difficult to accomplish in a smaller department. Like it or not, a large department has more clout if used wisely, something I will not elaborate on further. It is easier to revise curricula. There would not have been two new majors in plant science and ecology if there had not been a merger. Most faculty members feel that the IT structure has greatly improved after the merger. Same for the business and HR support. The outreach component (RICs) has been strengthened. We have now on staff a writer and an events planner. When federal proposals are submitted which require an outreach component, the outreach arm of Plant Sciences is been used as evidence and vehicle for proposed outreach activities. The new $15M award in horticulture (CRSP) would never have happened without the merger. In the department interdisciplinary proposals are been submitted which would likely not have occurred before the merger. If done properly and with the right leadership, the outcome of merging departments can become a blessing and be advantageous. But it has to be done properly and it does require some leadership. Otherwise, it may lead to a full blown headache for all.

Chris van Kessel

Textiles and Clothing

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Forums / CPC 3-5-10 DRAFT Reports: CA&ES Departments - Strategic Options / Textiles and Clothing Feedback

Fibrous materials and bioproducts - You-Lo Hsieh (Mar 11, 2010 4:40 PM)

Fibrous materials are integral part of human life and natural environment and therefore, the scholarship is central to the mission of CA&ES. Our faculty expertise in the fibrous materials science and engineering as well consumer culture is unique to this campus and UC. Our distinguished scholarship in fiber chemistry and engineering, polymers, biomaterials, nanotechnology, human perception and protection and product design and development complements the inorganic materials science (ceramics, metals, etc) in Engineering and Design in HArCs. Our contribution has already reached in areas beyond CA&ES across campus.

As a multi-disciplinary faculty, aligning TXC with any single existing academic program cannot offer the same level of productive opportunity across disciplines nor functional areas (teaching, research, outreach). From strategic point of view, any academic structure that distinguishes programmatic identify and facilitates innovative alliances would be conducive to faculty driven, synergistic program building now and in the long run. A combination of options 2 and 3 plus coordination with L&S would enable the continuing transforming and offering of the leading, inter-college TXC and FPS undergraduate programs in a new era.

Aspects to be discussed in academic visioning and planning:
-A clear and global vision that unites (Bisson's idea is worthy of further discussion & exploration)
-Strategic and synergistic alliance for building existing strengths and new areas (mechanism to facilitate such efforts)
-Consideration of undergraduate curriculum should be core to academic planning and organization and I&R resource allocation (major/program reviews; course offerings critical to majors versus those for GE and only for generating SCHs; review current programs to identify preparatory clusters and inter-program majors)

Merge makes sense in areas where multiple faculty share similar expertise thus can teach for each other. While our faculty can contribute, complement and bridge for other programs, in none of options, faculty from other existing departments can help teach TXC or FPS courses.

Here are a few comments regarding the CPC's drafted options:

Option 1: While remaining as an academic unit with academic and budgetary autonomy is critical to maintaining program excellence in fibrous materials science and culture, operating within a larger administrative structure as we currently are has

worked well. The on-going discussion and collaboration with others to develop both TXC and FPS majors into inter-departmental and inter-college programs require campus facilitation (academic senate and administration) and inter-college coordination of resources.

Option 2: Current and on-going discussion and planning for a Biomaterial curriculum have been facilitated by shared interest and complementary expertise of faculty in biopolymer, materials science and bio-engineering in both departments. Exploration and discussion between the faculty on overall academic programs is yet to occur. Impact and potential benefit of such merge are yet to be determined.

Option 3: Disciplinary expertise and parallel interest along natural products, biopolymers and consumer/behavior/sensory science with FST and VEN and along green and analytical chemistry with ETX have been well recognized and successful in research collaboration over the years as independent departments. Concerted effort with pooled resources can accelerate development of new research areas and grant supports.

Option 4: Dispersing faculty to different academic units will disable mechanism of academic autonomy and stewardship for the unique FPS and TXC majors, educating leaders for the nation's leading apparel-fiber industry in California.

refashioning with vision - Susan Kaiser (Mar 11, 2010 6:23 PM)

I appreciate the dedicated efforts of the CPC in a very difficult process. I hope that as CA&ES refashions itself, we can consider some imaginative new structures for undergraduate (as well as graduate) teaching, including those that are cross-college. I also hope that CA&ES does not lose the ability to integrate biological, physical, and social science perspectives to address compelling contemporary issues.

A number of faculty have endorsed the idea of a "strong divisional" model to establish new academic and administrative synergies, and to serve as an intermediate stage in the refashioning of CA&ES. I think this idea should receive some serious attention (perhaps with a name other than "division"), and among the specific suggestions offered, I am very intrigued by Linda Bisson's 4-division model, which would foster synergies among BAE, FS&T, TXC, and VEN in the context of her fourth division that she calls "Bio 4." The combination of commodity-specific knowledges and identities (including their interdisciplinarity) with a larger umbrella or organizing principle could be very productive.

Viticulture and Enology

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Forums / CPC 3-5-10 DRAFT Reports: CA&ES Departments - Strategic Options / Viticulture and Enology Feedback

Department Response to Draft Report - Andrew Waterhouse (Mar 11, 2010 6:44 PM)

Last Edited By Brenda Nakamoto on Mar 12, 2010 10:09 AM

March 11,2010

College Planning Committee
College of Agricultural and Environmental Science

Dear CPC,

The Department of Viticulture & Enology faculty greatly appreciate your efforts, conducted under much pressure from impending budget cuts, and recognize that decisions had to be made within a constrained time frame.

The faculty of the Department met March 10th to discuss the options presented in the report. After much careful thought and deliberation my faculty voted unanimously to support Option 1, to remain a separate and focused unit addressing Viticulture and Enology.

Our discussion highlighted a strong concern for how a merger would dramatically alter our teaching program. We felt the other options presented take into consideration the impact on degree programs, and we feel that a merger would result in a rapid and significant dilution of the focus and quality of the degree program in Viticulture and Enology. We currently are engaged in many interdepartmental research collaborations (nearly every faculty member has an ongoing collaboration with faculty from other Departments), and organizational structures would have little impact on that activity.

If there is a need to collapse the FTE that support a major, the faculty of that major must be directly involved in planning to accommodate such change. This may well involve discussions with faculty or Departments outside the major. However, the decision on the best strategy to sustain the major, change or disband it, must be made by faculty directly involved in supporting the degree program. Planning efforts to date have not been structured to allow for those discussions.

Another concern was the minor role of Cooperative Extension in the planning process. While their numbers have been shrinking, it is difficult to imagine a College of Agriculture, focused on the application of research, without a major extension effort; an effort led by faculty dedicated to this mission.

The Department is a strongly interdisciplinary program, in a way a microcosm of the College, but with a particular commodity focus. Merging with FST would dilute the focus on enology and leave our viticulturists with no real home, probably resulting in their eventual departure to PS, etc.

However, the strength of the combination of enology and viticulture in one integrated unit was started at Davis and has subsequently been emulated world wide at many new institutions, and now even in many traditional European universities. Just last year the Faculty of Enology at Bordeaux joined forces with viticultural science after being independent for over 125 years.

Finally, the department has a strong brand identity amongst our stakeholders in the grape and wine industries, as well as with other academic programs worldwide and among potential donors to the campus. Our graduates have a major impact on the value of the California grape crop, one of the highest value in the state. The loss of that identity would severely compromise our ability to sustain the national and international leadership we have today.

Option 2, "Maintain a strong, relatively focused program in VEN," looked intriguing, but the mechanisms for joint appointments was not clear. Increasing our overall FTE by expanding joint appointments for non-departmental college faculty self-associating with us may well be a good means to sustain strength but further discussion and clarification is needed.

In summary, the faculty unanimously feel the departmental identity of Viticulture and Enology is required to sustain a leading international program. The loss of a department would greatly damage the degree program, connections to our stakeholders, and future development opportunities.

Sincerely,

Andrew Waterhouse, Chair

Updated Department Response to Draft Report - Andrew Waterhouse (Mar 11, 2010 9:32 PM)

Joint VEN FST NUT Response - Andrew Waterhouse (Mar 11, 2010 6:46 PM)

Last Edited By Brenda Nakamoto on Mar 12, 2010 9:58 AM
March 11, 2010

Dear CPC,

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We appreciate the planning effort of the committee and while we feel our independence is critical, the possible linkages identified in the report has led to discussions that could build strength to the college and campus.

Andrew Waterhouse, Chair, Viticulture and Enology
Jim Seiber, Chair, Food Science and Technology
Francene Steinberg, Chair, Nutrition

Wildlife, Fish, and Conservation Biology

Forums / CPC 3-5-10 DRAFT Reports: CA&ES Departments - Strategic Options / Wildlife, Fish and Conservation Biology Feedback

Posted on behalf of Doug Kelt, Chair WFCB - Mary Delany (Mar 7, 2010 5:10 PM)

Last Edited By Brenda Nakamoto on Mar 16, 2010 1:48 PM
Last Edited By Brenda Nakamoto on Mar 11, 2010 3:59 PM

Dear Mary, Jan,

I have heard of Linda Bisson's suggestion for a "strong division" model that might channel resources at the division level but leave departments otherwise largely intact, allowing further time to affect any consolidations but importantly retaining the impressive diversity of programmatic emphases within CA&ES. Linda's approach seems a reasonable intermediate step that allows for administrative consolidation as well as programmatic diversity. Moreover, as far as I can tell it provides for all of Neal's quantitative objectives other than the 12-15 FTE targets, but the lack of clear rationale underlying these makes them a target for dissatisfaction - as a "tool" to promote College reorg they are useful, but as a justifiable goal it's been difficult to "sell" to faculty.

As I understand it, Linda was suggesting four thematic areas, and the following provisional model for allocation of departments:

I. Human Biology and Ecology (HBE) - NUT, ARE, HCD

II. Earth Sciences and Conservation Biology (ESCB; consider renaming as Natural Resources and Conservation Biology, NRCB?) - ENT(?), ESP, ETOX, LAWR, LDA (or in HBE?), WFCB

III. Organismal Biology (OB) - ANS, PS, ENT(?), (PP, NEM)

IV. "Bio4" (Bioenergy, Bioprocessing, Biomaterials, Biotechnology) - FST, BAE, VEN, TXC

Of course, an alternative is the 3 divisions proposed in the CPC report, which emphasizes a different combination of College strengths.

I. Agricultural & Food Systems (AFS) - ANS, BAE, ENT(?), FST, PS, (PP, NEM), VEN

II. Human Ecology (HE) - NUT, ARE, HCD, LDA(?), TXC

III. Natural Resources and Ecosystem Science & Management (NRESM) - ENT(?), ESP, ETOX, LAWR, LDA(?), WFCB

Of course, Departments should be given an opportunity to self-affiliate, and there is always concern over departments feeling "torn" between multiple thematic areas (but the same problem holds with departmental "consolidations" or faculty re-affiliation). Where to place LDA, for example, is not clear (departmental members can decide), and WFCB logically fits two of Linda's 4-theme model (OB and ESCB). Some departments might prefer spanning divisions, although this might result in unnecessary administrative challenges.

I am heading to my field site in an hour or so and will not likely have e-access until Friday afternoon, so I wanted to put in my support in principle for an alternative to the mergers that appear to have become the focus of the CPC efforts of late. I suspect that a strong division approach might garner much stronger faculty support than a suite of mergers that may seem reasonable from "outside" but less so to members of affected departments.

Just a few thoughts for the road. I'll think of y'all as I'm basking in field work -

Doug Kelt
Chair, Department of Wildlife, Fish, & Conservation Biology

Posted on behalf of Tim Caro, Prof WFCB - Mary Delany (Mar 8, 2010 8:18 AM)

There are several retirements pending in WFCB so I think we would do well to fuse with another Department.

So fuse with whom? If CAES wants to stress WFCB's perceived teaching strength in basic taxonomic biology there is an argument for ANS.There, in a revised major, we could maintain our taxonomic focus in teaching - but note that several of our good teachers will probably retire in the next few years. Therefore, I donot see our taxonomic major necessarily surviving for very long unless we get excellent taxonomically focused teachers as replacements - always a gamble. There are arguments for bolstering the Animal Biology major - but to be honest - that major was imposed on us by previous deans and has never been very successful - it does not have a strong conceptual core. From a research perspective, there is little overlap between ANS and WFCB - conservation biology is trying to minimize the human footprint; animal science is trying to make it more efficient. It sounds like two sides of the same coin - but really it is not - conservation of wild places and efficient farming are miles apart (with the exception of land use management strategy, but none of us do that anyway); thus I suspect there would be little coordination or added value from collaboration among these two sets of colleagues.

Fusing WFCB with ANS and ENT is a more interesting alternative because ENT has some strong faculty members working on environmental and biodiversity issues which would give WFCB a group of fresh conservation-oriented colleagues with whom to interact. In short, this option might be the best middle ground in maintaining and expanding the taxonomic major - to invertebrates - and in ramping up

conservation research productivity. But again I see a potential intellectual divide appearing between, on the one hand, ANS and those ENT faculty who work on pest issues and, on the other, between the majority of WFCB faculty plus ENT biodiversity and conservation faculty.

If CAES wants to foster a high level of conservation research productivity, fusion with ESP or ESP/ETOX/LAWR is the way to go. Two or perhaps three of us in WFCB already interact very regularly with ESP faculty on scientific matters. Conservation Biology, a subject that I teach and publish regularly in, is no longer solely the purview of the biological sciences but now involves huge inputs from economics, and the social and political sciences. There is a possibility for a national top-of-the-line major in conservation biology if ESP and WFCB were to pool their talents. In 2010, on this campus, conservation biology plays second fiddle to evolution, ecology and perhaps even animal behavior - a great shame. Splitting conservation folks between ESPand WFCB/ANS would emasculate conservation biology on this campus even further.

I hope that these thoughts are of some use,

Tim Caro
Professor of Wildlife Biology, Department of Wildlife, Fish and Conservation Biology

Posted on behalf of Brian Todd, WFCB - Mary Delany (Mar 12, 2010 8:38 AM)

Hi Mary,
I hope my comments are not too late. Please share them with the rest of the CPC.

I've been relatively quiet up to this point. As a (very) new faculty member who just started 3 months ago, I've been worried about my potential naiveté regarding the culture and history of the college and other departments. Hence my quietness. On the other hand, in contrast to most faculty in the college, I will be living with the outcome of this current bout of restructuring for much longer and I understand that input from newer faculty is thus valuable.

I have been patiently observing the "restructuring" discussions and I am obviously concerned about the future of my department, the support and value for my own research program, and the continuity and persistence of our core teaching deliverable - ie, our undergraduate program. Our department and undergraduate program is unique among all of the UC, and our "wildlife" program is one of only two in our state. Moreover, our program is unique across the country in being one of the very rare "wildlife" programs whose focus has tended toward conservation for its own sake, including non-game species, whereas many wildlife and fisheries programs have always focused more traditionally on sustaining consumable wildlife for the purpose of persistent killing opportunity (ie, fishing, hunting). Although many of us in WFCB have an organismal focus, particularly vertebrates, there seems to be the greatest conceptual linkage with research interests of faculty in ESP, particularly because of our conservation focus. A quick perusal of the typical publication outlets of the faculty in various proposed partner departments also suggests this is the case.

I'm disappointed that there is the appearance in this whole process of merging some departments solely for the sake of merging, rather than it being an internal, organic outgrowth of shared interests among faculty leading to a vibrant and cohesive new department (although I recognize the current fiscal motivation for doing so). To be clear, I can say that I would tentatively support the creation of a new department comprised of any number of previous departments or faculty, but I would hope that this new department has a clear thematic focus and shared vision moving forward. I'm afraid that the smooshing of two previous departments into an uncomfortable union will not lead to any vibrancy. There is also serious risk of loss of programs and themes represented by the smaller department via gradual attrition at the hands of the larger department in a forced pairing. Alternatives that may minimize this are the combining of more than 2 departments, or the formation of an altogether new department comprised of faculty with shared vision from any of several departments. At any rate, given the serious struggles that our society faces, especially here in our own state of CA, it is imperative that we preserve a robust and functional wildlife and fish conservation theme in our

college and university.

Kindly,
Brian

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Brian D. Todd
Assistant Professor
Department of Wildlife, Fish and Conservation Biology

3rd try as text (Eadie!) - John Eadie (Mar 12, 2010 4:55 PM)

I would like to make 2 general comments on the CPC report and process and 1 specific comment reflecting the options posed for my own department.
Genera comments:
(1) I confess to being disappointed in the results of the CPC process. I had thought that, at the outset, the goal was to re-envision the college. In the face of increasing challenges, here was an opportunity - and perhaps even a mandate - to consider bold, innovative ideas to re-structure and re-invigorate CAES. I understand that this was a large and, in retrospect, impossible undertaking. However, I had hoped the CPC would seek a larger vision, and perhaps explore some ideas on how the thematic cores of our college might be re-aligned. I believe this was the focus of some of the early meetings, but that seems to have been abandoned. Instead, the report, in the current draft, has devolved to a process of "merger-mania', comprising a shopping list of how each department could be merged/submerged/aligned with one or more other departments. There is merit in these considerations – indeed one value of this exercise has been to encourage faculty to more seriously consider with whom they are most closely aligned and to explore what colleagues in other departments are doing. The increased level of inter-departmental conversation among has been refreshing. Yet, the report offers little direction on how we might proceed; there is a veritable 'pull-down' list of possibilities for each department (the default option typically being "stay as is") and there is no clear path for how these ideas might be coalesced into a strategic direction. My worry is that this simply lines up a shooting gallery, and the choice of which targets to shoot and which to leave bobbing falls primarily to the discretion of the Dean. I had hoped for more synthesis and vision. Moreover, it is not clear to me how many of the proposed mergers would resolve the financial crisis and pending loss of faculty that has been projected (the original motivation underlying this exercise). Perhaps there may be some reduction of redundancy in teaching but these economies were not thoroughly explicated in the assessment of strengths and weaknesses. In the end, I wonder how this process has progressed much beyond the APC report.

(2) My second general comment is simply more of a whine. I am amazed (and quite frustrated) at the extraordinarily limited time period over which comments on the CPC report are being sought (6 days!!!). This report has ramifications to several departments, majors and careers of faculty in the CAES and yet it is all very rushed. I understand the dire economic situation, and I also recognize that we will always claim there is insufficient time, and I further appreciate that the CPC has been meeting weekly since October. Fair enough. But the rapidity of this process, and especially the very limited window for feedback and consultation with faculty, serves to create a sense of disengagement and distrust. Enough whining!

(3) My specific comment deals with my own department (WFCB) for which a number of options have been identified. We have initiated a process to explore all of the options listed. This is healthy and could lead to a strengthening of our major, program, and college and lead to a growing coalescence of interest and expertise, particularly in the field of conservation biology and resource management. All of the options seem potentially viable and I believe our faculty are genuine in their willingness to explore these options. I would urge the CPC and the Dean to envision a practical and realistic strategy to allow these conversations to continue over a reasonable timeframe and to allow some level of self-assortment of faculty interests and expertise. An attempt impose a top-down structure would be counter-productive.
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From the environmental sciences perspective, I think the "super-department" option (merging WFCB, ESP, LAWR, ETOX) would be unwieldy and would be largely a marriage of convenience to achieve a demographic objective (= a really big department) without a coherent strategic objective. It would, in effect, be a forced marriage, not one based on a common and shared vision. Ultimately, I suspect it would function as a coalition of independent groups who might continue to operate autonomously (as much as possible). Of the other options (excluding the stay-as-is option), there are two that seem most viable, but take us in different trajectories. A merger with Animal Science retains and builds on the Animal Biology strengths on campus and helps to broaden the focus from domestic to wild vertebrates. Our colleagues in Animal Science have been remarkably open to these ideas and this is very encouraging. One concern about such a merger, however, is that it focuses on the taxonomic, rather than disciplinary, linkages of our programs (we used to have a similar department – it was called Zoology and was disbanded 20+ years because the taxonomic orientation was viewed as 'old school' and lacked the interdisciplinary vision sought for the future). Nonetheless, if mergers were deemed essential, a department of Animal Biology, Conservation and Management could be a viable option. One of the factors that makes this a reasonable prospect for success is that our colleagues in Animal Science are, for the most part, very open and willing to make this work. This sort of cooperative and pro-active spirit will be essential to successful integration for any proposed merger.

The other viable option is a merger with ESP. This has been hinted at for all the years that I have been at UCD. Yet, there appear to be many undercurrents of uncertainty (and perhaps stronger feelings) against such a merger. There is an impression of different cultures of the two departments, perceptions of differences in the quality of the programs and the research focus of faculty, and different histories, certainly with regard to an appreciation for the important role of policy. There are, certainly, differences in focus - WFCB focuses on vertebrate ecology with an applied (but not exclusively applied) orientation, whereas ESP appears to be broader based, perhaps more theoretical and less applied, and with a strong policy emphasis. But, I am not convinced that such a merger would be unsuccessful. Cultures can change, provided the inhabitants are willing to do so. I personally view the policy emphasis as a hugely vital element of any program with a conservation science focus and I don't see that policy would be devalued in such an expanded department. If anything, policy and the social sciences ARE where the field of conservation biology and ecology needs to grow (and is). The concern I have for such a merger is the fairly strong undercurrents of perceived differences that could pre-empt a successful integration. These would have to be addressed – perhaps they are, in fact, more perceived than real (although the very different reactions of ANS vs. ESP to the prospect of a merger with WFCB is illustrative). A further concern from WFCBs perspective is that this might effectively be a 'submerger' of a smaller department into a larger department with the eventual loss of the programmatic focus of the smaller department (extinction by erosion or neglect).

There is one other option that many have talked about, most view as being completely unrealistic, but one I wish not to give-up on entirely – i.e., a new department of Conservation Ecology and Policy. UC Davis has extraordinary strength in this field, it is an emerging discipline likely only to get stronger as we continue to impact natural systems, most of the students in the WFCB major, for example, are coming into our major because of this interest and several other majors now converge on this theme (with increasing confusion for students, unnecessary competition and perhaps less efficient use of our teaching resources). We have top-level researchers working in this field, and many of the graduate students in several graduate groups (GGE, ABGG) work in this area and come to UCD because of these strengths. Yet, we are spread among many different departments and we lack a cohesive undergraduate program that covers all aspects of conservation science. I think this is a missed opportunity. If we wanted to truly capitalize on UCD's strengths in this field and we were willing to consider some serious re-organization (allowing faculty from several different departments to self-assort), this could be a dynamic alternative. The difficulty is that there is little incentive for faculty to do so, especially in the "stable" departments – they can do most of what they do now, without such upheaval. The challenge will always be to make such a reorganization attractive; simply a promise of potential future FTE would likely be insufficient to move us off our mountains.

Re: 3rd try as text (Eadie!) - Andrew Waterhouse (Mar 14, 2010 12:33 PM)

John,
I share your concern #1 and look for opportunities in the future to undertake such planning.

You end with exactly the sort of idea that should be discussed in a longer term planning effort that you allude to. This is the type of planning that we need now to truly address how to thrive with a smaller College footprint. I am not in the field, but it seems that the ideas you raise might be best discussed even with faculty outside the college.

ALW