

Memorandum

To: 2005-06 Committee on Academic Planning & Review
Dr. Julie Norton, Chair

From: Professor David Larson, Chair

Date: November 22, 2005

Subject: Five-Year Plan of Geography & Environmental Studies

Attached is the Five-Year Plan from the faculty of the Department of Geography & Environmental Studies, plus Appendix B, the External Reviewer's Report.

Owing to unanticipated reproduction difficulties, Appendix A and Appendix C will be delivered under separate cover directly to the departmental offices of each CAPR member early next week.

I extend sincere apologies for this inconvenience.

cc: Dr. Alden Reimonenq, Dean of CLASS

Five-Year Plan of the Geography BA/BS, Geography MA, & Environmental Studies BA Programs California State University, East Bay

October 2005

Developed in accordance with the Policy and Procedures for Five-Year Reviews and Plans (00-01 CAPR 7)

A primary purpose of the Five-Year Program Review is for academic programs to develop plans for change and improvement in order to maintain currency and even leadership in their respective disciplines. This Plan, therefore, describes what the Geography BA/BS, Geography MA and Environmental Studies BA programs intend to do during the five years from 2003/04 through 2007/08.

The Five-Year plan for these three programs addresses the recommendations and concerns identified in the Self-Study (Appendix A). The programs have made only modest progress in implementing their outcomes assessment plan as discussed in the self-study and thus this plan addresses that issue from a forward-looking perspective. A draft of this Plan was provided to the External Reviewer, Paul F. Starrs, Professor of Geography at the University of Nevada, Reno in May, 2004. After receiving the External Reviewer's Report (Appendix B), the plan was amended to comply with many of his recommendations as detailed in our program's response to Prof. Starrs' report (Appendix C). In forming this Five-Year Plan, the faculty of the Geography BA/BS, Geography MA and Environmental Studies BA programs, have addressed the four core areas (**Curriculum, Students, Faculty, and Resources**). Standard CAPR questions, where appropriate, serve as prompts to our responses. As suggested in 00-01 CAPR 7, each of the questions addressed in our Plan includes the following, as appropriate.

- a) The expected action/change to be taken, e.g. revision of curriculum, addition of faculty, purchase of equipment, etc.
- b) A specific time line for when the task will be completed.
- c) Person(s) responsible for carrying out the needed change.
- d) Anticipated cost.

1. Curriculum

What curricular changes do our programs envisage during the next five years?
What developments are likely to cause our programs to change the curriculum?

Over the next several years, we anticipate revamping the Environmental Studies BA, the Geography BS, and the Geography MA programs.

Work has already begun on this crucial initiative. The Environmental Studies (ENVT) program redesign was split into two phases. The first phase consisted of modifying both the upper and lower division core so as to introduce greater depth via course sequences and more quantitative analysis and problem-based learning into the curriculum. The new core (attached to Appendix C-Response to the External Reviewer's Report) was approved by the CLASS Curriculum Committee in Spring 2005, meeting the deadline for inclusion in the next (2006-08) University catalog. The second (more complex) phase, which like the first will be spearheaded by the Chair and Prof. Garbesi in AY 2005-06 (and perhaps beyond) involves retooling the various Options. The current major includes five Options, each consisting of 20-24 units. ENVT majors select one Option or "area of concentration." We plan to reduce the number of Options from five to three, one of which (Environmental Resource Management) will consist of a significantly different assemblage of courses. Since the Options consist of courses offered by well over a dozen different departments across all four colleges, this change will incorporate new expertise on campus (in the form of recently hired faculty university-wide) in topics germane to the evolving discipline of Environmental Studies.

Revamping the BS program in Geography will commence in AY 2005-06. Prof. Lee and Prof. Li will take the lead in modifying the existing program to make it more "contemporary" – at least in the realm of requiring more of the so-called techniques courses and courses on resource management (energy and water) in which the department justifiably prides itself. We also anticipate the revamped major will require (as opposed to recommend) additional courses in world regions, thereby providing this program with a more comprehensive international focus.

An expressed goal of the faculty is to attach to the title of the MA program some derivation of the word "Environment." We firmly believe that this change will not only validate the existing graduate program by formally recognizing what we already teach in many of our seminars, but would allow us to market our collective expertise to an entirely different group of post-baccalaureate students seeking a graduate program with a focus on environmental management or sustainable development issues. Anecdotal data gathered from phone and email inquiries by prospective graduate students has convinced us that "Geography" standing alone does not resonate with many students who are seeking a degree that explicitly identifies with "Environment." In AY 2005-06, the faculty as a whole will explore whether this structural change is worth pursuing at this time and will establish a time table for formally proposing the change.

2. Students

The recent acceptance into the General Education program of several lower-division (2000-level) courses from both Geography and Environmental Studies (perhaps especially Environmental Studies 2000: *Introduction to the Environment*) was a significant development, almost surely a turning point for both majors. A decade ago, lower division introductory survey courses in Environmental Studies and Geography each

routinely drew 400+ students annually. From these pools, we would draw many majors for each of the programs. Our departmental motto was “we recruit by force of example,” meaning that we attracted new majors by assigning dynamic faculty to teach an engaging subject to an ocean of mostly undeclared students. That was always our best opportunity to expose our subject to the masses. After all, how many high school (or community college, for that matter) students decide to major in Geography *or* Environmental Studies before they get to a university? Most need a prompt, a gateway to our disciplines which is what we had in Environmental Studies 2000 and Geography 1000.

Starting in the late 1990s, we were walled off from that vast pool of potential majors by institutional curricular changes (specifically the GE cluster program for first- and second-year students). We no longer had at our disposal the critical vehicle of intro courses with the GE *imprimatur* to deliver the message of our disciplines. Annual enrollments in the introductory courses plummeted. And with that, the number of majors dropped accordingly, especially in Environmental Studies. (Combined, the number of majors fell from 130+ to under 50.)

The department made internal adjustments to the new circumstances, primarily by placing a greater emphasis on upper-division GE, including multiple offerings of survey courses on natural resources management and regions of the world, especially the United States and California. Liberal Studies majors formed the bulk of our new clientele. During this time, Geography 3000 (*Resource Management*) was incorporated into the PACE curriculum. This strategy has worked to keep our annualized FTES at a respectable level, but it did not bring in the desired new majors. We have been hamstrung in that regard.

The return of selected lower-division offerings to the wide-open sophomore-level GE offers great promise for raising overall FTES and, especially, the number of “home grown” majors. With that, along with a more concentrated effort to raise the visibility of our department with the region’s community colleges (and thus steer additional transfer students to our programs), the department is committed to recapturing a bit of its history and once again cross the 100 majors threshold for the combined programs.

Serving Student Needs

A chief goal for the 1997-02 planning period was: *To maintain and expand student enrollment in both Geography and Environmental Studies majors as well as other department’s majors and undeclared students taking our courses over the period 1997-2002.*

This will continue to be our goal during the period before our next program review. We believe we should make greater effort to systematically recruit and service our majors and general education clientele. It thus seems highly appropriate to recycle or resuscitate many of the goals we articulated in our last review (in *italics* below). However, this time it is prudent to assign specific faculty to the tasks in order to ensure their timely

completion and ongoing maintenance. As appropriate, specific faculty members are listed below if the goal is not applicable to each person's individual instructional activities.

Prepare in-house guides as to the value of geography and environmental studies as an undergraduate and graduate major

This should be the job of the major advisors – Profs. Lee, Garbesi and Woo. They will develop web-page materials on career opportunities and the lifelong learning values and relevance of Geography and Environmental Studies using Association of American Geographers (AAG) and Association of Environmental Professionals (AEP) materials and other sources, including alumni data and selected alumni profiles. Chair Larson, the resident keeper of business cards and anecdotes concerning graduates from the past 15 or so years, will contribute information on our alumni. The Office of University Advancement (UA) will be contacted (Lee – currently CLASS Liaison to UA) for a copy of the Geography and Environmental Studies alumni database and support staff will be asked to prepare a letter soliciting input from graduates on career and other details. This task is to be completed by Summer 2006.

Recognize changing enrollment patterns to place more emphasis on 3000-level recruiting courses

As discussed in various faculty meetings, we will seriously consider designing a 3000-level course that focuses on globalization themes introduced in GEOG 2400 (*Geography of World Development*). This new course will be promoted as a GE offering designed to attract transferring community college students and marketed to undeclared majors, in particular. GEOG 2400, created for the Sophomore Cluster program that was discontinued at the end of 2004-05, will stay (for now) as a viable offering for lower division students. It is already an elective in the newly reworked Liberal Studies program. Some faculty members feel strongly that we should design a wholly new upper-division World Geography course that can inform our student body about the important political, environmental, cultural and urban geographies that are vital to understanding globalization and how it affects us. The title of this course might indeed be the *Geography of Globalization*, a topic already taught at a number of prestigious universities throughout the country. The person responsible for leading this effort will be Prof. Lee, originator and instructor of GEOG 2400. This task is to be completed by Fall 2006.

The department has plans to redesign another of its courses that was explicitly created for the expired Sophomore Clusters: GEOG 2200 (*Geography of Asian Americans*). Prof. Woo has agreed to restructure that course into an upper division offering, *Asian Americans: Spatial Disparity and Multiculturalism*, for which he will seek approval as a course that fulfills the Cultural Groups/Women G.E. requirement.

The Chair has identified a handful of upper division course that should have a rightful place in the University's General Education program, in either Social Science (D4) or Science (B6). These courses will seek GE designation under the new guidelines

introduced in AY 2004-05. Appropriate paperwork has already been submitted to the Committee on Instruction and Curriculum.

Undertake more efforts to promote selected Geography and Environmental Studies classes

All faculty members should undertake this effort. The steps outlined in 1997 should be recycled and more forcefully and systematically implemented:

- a. Faculty will produce flyers advertising course offerings (beginning Fall 2004 through 2007)
- b. Faculty will make announcements in companion or complementary courses as to upcoming course offerings, both within and outside the department. (beginning Fall 2004 through 2007)
- c. Faculty will place announcements and descriptions of upcoming courses on the soon-to-be finalized departmental web-page (beginning Fall 2005 through 2007)
- d. Faculty will maintain a collection of past syllabi in the Geography and Environmental Studies office for browsing by students (Faculty may elect to place these electronically on the departmental web-page (beginning Fall 2005 through 2007)
- e. Faculty will send advance notices of course offerings to all majors prior to the schedule being published via Blackboard, major organizations and/or via email listserv (beginning Fall 2005 through 2007).

Offer an average of one course per quarter at the Concord Campus

This practice will be continued. However, our goal has changed to two course per quarter whenever feasible. All faculty members will be encouraged to teach in Concord, although should one or more faculty do so regularly, others who prefer not to need not.

To target classes to attractive and non-conflicting time slots

Chair Larson will continue to evaluate and determine the best time-slot offerings for all courses and the appropriate balance of multiple offerings. The major advisors (Lee, Woo and Garbesi) and the department chair will review major and minor requirements and electives and establish a model sequence of multiple- and single-class offerings that allows majors to progress, without bottlenecks, through the curriculum. Idealized annual schedules for two years going forward will be developed and given to majors as a road map for how they should structure their departmental and non-departmental selections (this will impose a certain degree of rigidity on the sequencing of faculty offerings and require careful treatment when sabbaticals or banked quarters are invoked). These schedules should be developed and ready to go by the Winter Quarter 2006.

Faculty will continue to offer evening classes but on a more systematic basis, with at least two every quarter that begin at 6 PM or later. Chair Larson will plan class schedules a full calendar year in advance (Spring Quarter declaration of courses for the following Fall-Summer cycle) with sequencing and each quarter's timing designed to prevent cannibalization of the base of potential students by pitting one course against another. These proposed schedules will be posted on the departmental website for students to see ahead of the coming academic year.

Career Opportunities

According to Prof. Li, GIS has been a fairly good opportunity for our students, graduate or undergraduate. More than a dozen of our students have filled new GIS positions in counties, cities, public companies, and private companies. This trend is likely to continue. In the light of this experience, Prof. Li suggests that we probably need more career-oriented courses. That is what our students and the broader society expect from a university like ours. Prof. Lee is in agreement with this observation. A number of students in both the Geography and Environmental Studies programs who have taken his courses in water resources and watershed management (GEOG 4350 and GEOG 4355), with their emphasis on technical and management questions, have had great success in securing jobs in the water resources field. It is common to find our graduates working in or with local and state government units associated with implementation of Clean Water Act requirements.

Departmental faculty will implement the following improvements to student services during 2003-2008:

To require annual one-on-one sessions for all declared majors with an assigned faculty member

We will require both annual meetings to discuss progress and performance and hold formal exit interviews prior to graduation for the purposes of learning outcomes assessment and as both an aid to career development and as a lead-off to continued alumni association with the department. This began in Fall 2004, carried out by Advisors Lee, Garbesi and Woo and Chair Larson.

To create a deeper team spirit among faculty and students

This will be done through the hosting an end-of-year and start-of-year student-faculty mixers in which faculty, lecturers, majors and graduate students interact with each other and discuss important upcoming issues and events such as faculty sabbaticals, travel plans and research projects, Earth Day events, social activities and so forth. The Chair hosted the first of these gatherings at a local restaurant at the end of Spring 2005.

To compile a centralized student tracking database/spreadsheet

With all the problems associated with implementing Degree Works, tracking student progress has not really been improved over previous methods. Major advisors, Lee, Garbesi and Woo will maintain a database that will be updated regularly to identify which majors/MA students have taken which courses and when – to be used in developing internal % completion and enrollment statistics, facilitating a more streamlined and efficient advisement capability that will aid students in a timely completion of their requirements. Through shared files, any faculty member will be able to check on the progress of a given student, read comments and identify substitutions on their records. This shall begin during AY 2005-06 and will involve each current student being called in for an interview in order to establish a progress baseline.

To require that all declared majors maintain a dossier or undergraduate “portfolio”

The catalog description for the Geography BA/BS and Environmental Studies BA will be edited to include instructions that students will maintain a portfolio of their work. A flyer and webpage entry will be developed by Advisors Lee and Garbesi and approved by Chair Larson that outlines the nature of the portfolio and how it will be used, to be ready by Spring 2006. The faculty will also explore the option of developing a required capstone class on Portfolio Assessment. It may be modeled on the portfolio assessment courses required at CSU Bakersfield and Sonoma State University.

Develop a more systematic geography and environmental studies careers counseling program within the department:

Chair Larson will work with the CSUEB Careers Counselors to develop and maintain a database of employers who have employed departmental graduates as interns or post-graduation and to organize an annual careers faire in which potential employers and alumni are invited to discuss geographical and environmental career options and preparing for the workplace. The first of these ideally would take place in Fall 2006.

Develop a formal alumni outreach program to foster long-term links with the department, assistance to fellow graduates and lifelong learning opportunities:

The Department will identify a member of faculty who will be responsible for alumni outreach and contacts. This faculty member – who will not be the Chair or an undergraduate advisor, since they already have significant time commitments – will develop an outreach system to maintain contacts with and monitor progress of current and future graduates, work with University Advancement to build up a working database of current whereabouts of department alumni, develop and conduct a questionnaire to identify career path choices and progress of alumni, prepare and maintain an alumni element in the departmental web site, and organize an alumni social function at some point in the future, at a noteworthy anniversary of the Department, perhaps.

Graduate Students

An important goal before our next program review will be to increase graduate student enrollment. We would hope to maintain active student numbers around 20, or approximately three graduate students per full-time faculty member. To do so, Prof. Woo, the graduate advisor, will develop and maintain a graduate element on department's web page to increase department visibility for student recruitment, providing detailed instructions and the option to electronically submit applications for consideration. The goal will be to have the graduate section of the web page up and running by Summer 2006. He will advertise for potential graduate students by updating and mailing our graduate program fact sheets to other geography departments in the state. This goal should be completed before the end of the Summer 2006.

Prof. Woo will explore the option of changing the Geography MA to a program that somehow incorporates the word "Environment" into the title: "Geography and Environmental Management," for example. He will hold a meeting of faculty and graduate students to discuss this option and, if consensus is that the change should be made, make the appropriate formal application to change the description of the MA to the appropriate review bodies which are tributary to the Academic Senate. The decision on whether or not to change the MA title and program description should be made no later than the end of the Spring Quarter 2006.

Prof. Woo will continue to work with the Chair to structure and consolidate the existing graduate seminars to maintain "timely" offerings to promote academic progress of our graduate students, the goal being to offer at least one graduate seminar in each quarter except summer. Each full-time faculty member will be scheduled to teach the seminar most closely related to their field of expertise. With one seminar taught each quarter on a rotating basis, six different seminars will be taught in a two-year academic period. Prof. Woo will work with selected faculty to develop new graduate-level courses in physical geography (Prof. Stine), GIS (Prof. Li) and quantitative research methods (Prof. Garbesi) to be ready for the 2007-2008 electronic catalog.

During the interval before the next program review, faculty will seek grants to support select graduate students through research assistantships. The ultimate goal would be for each faculty member who is interested in pursuing research themes (in which graduate students will be involved) to develop at least one funded research project with a graduate student component every two years.

Prof. Woo and faculty, as appropriate, will assist graduate students in developing grant proposals to seek financial support for their thesis research. This ideally should be done by the expansion of GEOG 6010 (Seminar in Geographic Thought and Research Methods) into a two-quarter series, with the latter quarter focusing on grant/thesis

proposal writing. Prof. Woo will examine the curricular changes needed to integrate this two-part seminar into the program.

Prof. Woo will also set up a system for monitoring the progress of our graduate students to encourage their completion of the MA in a 3-year time frame. He will compile and update a statistical database of our graduate students in terms of classification, year in the program, enrollment status, thesis advisor and academic progress. Faculty will have access to this information prior to offering a graduate seminar. As graduate advisor, Prof. Woo will hold at least one face-to-face meeting per academic year with each graduate student to check on her or his progress. He will organize a “general orientation” meeting with all faculty and graduate students at the beginning of each Fall Quarter, starting Fall 2006, so that staff and students can get to know each other and begin to develop camaraderie. Graduate students will be required to write a progress report each year to assess their academic development and justify their continued acceptance as an M.A. candidate within the program. The progress report will be submitted to the Advisor by the end of each Spring Quarter, starting in Spring 2006.

3. Faculty

The current core faculty (Drs. Garbesi, Larson, Lee, Li, Stine and Woo) has been intact since 1999, except when Prof. Larson served as the Interim Dean of ALSS (now CLASS) during AY 2001-02 and 2002-03. Two (Larson and Stine) are professors; the other four are tenured associate professors, two of whom are eligible to go up for promotion in AY 2006-07. The age spread of the group, 55 to 41, suggests we will remain a fully intact unit for at least the next five years. No retirements or separations are envisioned. Stability has been one of our strengths and will continue to be so.

Yet rarely have all of us been present for all three quarters of the standard academic year. Prof. Stine has an established history of seeking and securing external funding for his paleoclimate research (he is currently in the midst of a two-year \$300,000 grant from the Comer Education and Scientific Foundation; it will likely be renewed for an additional year). His field-based research has taken him away from the University for Fall Quarter six of the past seven years. Four other faculty members have received one- or two-quarter sabbaticals during the past three years. To date, instructional gaps have been bridged by a small collection of outstanding part-time faculty (including one with a three-year entitlement at a high time-base) who largely teach our upper division survey courses in Geography or, in a specific case in Environmental Studies, a professional specialty that fits perfectly with a core course (ENVT 4100: *Environmental Impact Analysis*).

Ours is an energetic faculty, engaged and productive. We believe the time has arrived to add another to our ranks. The department will formally request a new position whose search would be conducted in AY 2006-07. Still ruminating about the exact nature of this position, the faculty is currently of two minds. Some of us concur with the recommendation by our External Reviewer, who argues that the department’s next position should be a Latin Americanist cultural geographer, who would fill a niche that

has remained open since the retirement of Prof. Eder in 2000. Yet others of us also realize this is a prime opportunity to *innovate* rather than *replicate* and so are advocating for a position (still unnamed) that would emphasize the ties between environment, culture and everyday life in California in general and the San Francisco Bay Area in particular. This position could in fact be written to attract a cultural or human geographer with a broad interest in the environment and with regional expertise in the Spanish-speaking Americas, primarily Mexico. We believe there will be enrollment growth in both of our majors in the years ahead and that this new position will contribute significantly to our enterprise and to the mission of the University.

Program of scholarly research and output

As with our last five-year plan, as part of our general goals for the next five years and beyond, the department faculty commits itself to a program of original scholarly research, and production of refereed publications; conference abstracts, proceedings, and posters; technical consulting reports; and addresses and speeches to academic associations and civic organizations. We recognize that our large teaching load makes it difficult to match the publication output of a research-oriented faculty, but that this teaching load need not preclude a modest output of high-quality work. Each professor will strive to achieve the following departmental ideals during an average two-year period: completion of two journal articles (with two technical reports; two published “responses”; two book reviews; and participation in the organization of a conference considered equivalent to one such article); involvement in two scholarly conferences, either through oral presentation of research (resulting in a published abstract or paper), presentation of a plenary address or keynote speech (resulting in a published abstract or paper), or presentation of a poster. Because of the pressures of course development that encumber any new faculty member at this University, we establish these academic ideals for current faculty only in the event we were to add an assistant professor in the next couple of years.

Our faculty will also seek out other ways to raise the stature of our department. As part of broad five-year goals, faculty will regularize attendance at relevant academic meetings and conferences, contribute letters to the editor of local newspapers; make presentations to community groups and schools, and perform other types of community and outreach work, including service in local or regional government.

4. Resources

Will our current level of resources (staff, equipment, library resources, travel funds, etc.) be adequate to permit the maintenance or improvement of program quality during the next five years? (Identify needs based upon program priorities.)

According to Prof. Li, it is imperative that the following be completed early in the next review cycle:

1. Update the computer hardware in the GIS computer lab in MI 3032 by the end of the Summer or Fall quarters of 2005.

2. Upgrade GIS software from version 8.2 to 9.0 by the end of 2005 at the latest.

Prof. Li developed a proposal to accomplish the goal of refreshing the lab. The equipment upgrades are in progress as new computers (with more memory) along with 19" monitors are scheduled for installation in Fall 2005. The Dean supports our department's GIS and Cartography lab with allocations from the CLASS Information Technology budget. The department uses Supplies and Services funding to cover operating costs, mostly related to the printing and digitizing. So far, the annual costs are comfortably absorbed. Moreover, we have had some success in generating additional funding for lab expenses by way of having Prof. Li offer workshops and short courses through his affiliation with ESRI, the world leader in developing geographic information system software.

Physical Space Issues

The Department of Geography and Environmental Studies, after making possible the unification of the Mass Communication and Speech Communication programs by relocating to Robinson Hall in Fall 2002, is in the unfortunate situation of having some of its teaching and research facilities on opposite ends of campus. Our faculty offices and commonly used classrooms are located in Robinson Hall at the north end and our GIS laboratory and cartography/remote sensing classroom are located in Meiklejohn Hall at the south end. This mismatch is a burden on the faculty and students and leads to the suboptimal use of these facilities. Steps should be taken by CSUEB and CLASS to unify the department's facilities, although, given budget limitations and space concerns, this goal will likely have to wait until after construction of the new Business and Technology building is completed. The Chair should begin discussions with Dean Reimonenq of CLASS and Dean Kohl of CBE to identify space that should be freed up by the movement of CBE faculty from Robinson Hall and the Music & Business building into the new Business and Technology Center. In particular, the department should secure agreements for the allocation of the following space:

- GIS laboratory space sufficient to house 20-25 workstations, servers, digitizer, peripherals, projector, screens and a work area.
- Map collection space sufficient to house the complete flat-map collection currently located in Meiklejohn Hall and a desktop area sufficient for the analysis and use of these maps. [*This has been accomplished, effective September 2005*]
- Cartography/Remote Sensing teaching space, sufficient to house 20-25 cartography desks, computer projector, and storage space for stereoscopes.
- Equipment storage and maintenance space with appropriate cabinets and shelving to house all the equipment needed for field classes (we currently have this space although it is not sufficient to provide adequate, safe storage of equipment).

- Graduate work room sufficient to allow 5-6 graduate students workspace, given departmental goals to generate graduate research funding and RA positions.

To upgrade and maintain the department's educational technology (field, laboratory and computer equipment)

The Geography and Environmental Studies curriculum requires that students be exposed to up-to-date field and laboratory technologies for physical geography measurement and interpretation and particularly for map-making and geographical database development, analysis and interpretation. Because of budget limitations, current educational technology is in many areas inadequate to efficiently meet the needs of CSUEB students to acquire the essential knowledge as well as hands-on experience of the kinds of field instruments, Geographic Information System (GIS) and Global Positioning System (GPS) technologies that many will be expected to know about and be able to use in their future career and in most postgraduate studies that require significant fieldwork.

As a general goal for the next five years, the faculty will seek to upgrade this educational technology and put in place a system in which adequate maintenance of hardware and, increasingly important, of software will be achieved. Much of the field equipment used in geographical study, other than GPS, are relatively robust and do not change much over time, although they are subject to deterioration; many of the items in stock need to be replaced. For this equipment, the issue for the next five years is one of capital to acquire items. Computer equipment and software, on the other hand, become obsolete fast as developers continuously produce new versions of software adapted to the current state of information technology, especially related to networking software, server systems and microprocessor computational speed and capacity. For the GIS and GPS element of our educational technology the issue is therefore both capital acquisition and continuous servicing and upgrading of those acquisitions which includes service contracts, money to pay to upgrade to later editions of software, consumables such as disks, plotting paper and pens, etc. and periodic physical upgrading or replacement of hardware.

The number and type of field equipment is inadequate given the size of field classes and the types of field skills that must be taught to balance classroom instruction. Global Positioning Systems (GPS) is the fastest-growing field tool used in Geography today. Adequate instruction requires that at least five such devices, preferably more for a field class of 15, be obtained. As a result of a \$5,000 allocation for new equipment by the CLASS Dean, the department now owns five current-model GPS.

Before the recent upgrades, the departmental GIS system was in danger of being overwhelmed by technological change. The principal software supplier, ESRI - the producers of the industry standard Arc/Info -- is phasing out the stand-alone PC version of its software and replacing it with an NT server-based system that requires a powerful central microcomputer running the software and containing the main data base while students simultaneously access files and utilize the GIS from a network of interconnected PCs. To accommodate classes of around 20 students, which is necessary to service the

anticipated growth in our majors, maintain enrollment numbers, and also make available the technology to students from disciplines outside the department who could also use GIS (for example, Political Science, Marketing, Biology, Geology, Criminal Justice Administration), Geography's GIS computer laboratory ideally should be relocated to Robinson Hall or the Music & Business Building and expanded to include more PCs.

A review of GIS operations in the broader academic environment shows that the prevailing model is that most geography departments use internal funds to set up their facility, i.e. purchase initial equipment and software, and configure the work space to accommodate them (electrical outlets, cabling, etc.), but then seek to generate external revenues and grant funding that will cover the cost of upgrades and or expansion. Students are also levied a materials fee when taking GIS courses to cover the cost of consumables used in their classes.

In order to obtain funding to maintain and support GIS educational technology, Prof. Li and Prof. Woo will develop a program of academic research and/or contract work in the area of GIS that will help self-sustain and expand the department's educational technology. They will approach equipment manufacturers and software developers for donations and other creative arrangements for maintaining and upgrading system hardware and software (showcasing of equipment, product and beta testing, etc.) and develop one or more revenue-generating short-courses on the applications of GIS for selected target groups in the Greater Bay Area (e.g. watershed managers, environmental professionals). These tasks should be completed by Spring 2007.

To upgrade and expand the department's field equipment, Prof. Li will take the lead in obtaining funding for selecting and purchasing additional hand-held GPS systems for field mapping instruction. He will also upgrade and expand departmental soil and sediment analysis equipment, especially field sampling equipment (augers, sample containers, bulk density rings, etc.) and a set of soil sieves. He will work with Prof. Woo to upgrade and improve the department's air-photo and remote sensing equipment. These goals should be completed by Fall 2007.

Appendix A: Self-Study

Self-study of the Geography BA/BS, Geography MA and Environmental Studies BA Programs, California State University, Hayward is bound as a separate document and accompanies this **Five-Year Plan**.

Appendix B: External Reviewer's Report

To assist the review process, the External Reviewer, Professor Paul Starrs of the University of Nevada, Reno received the following documents: a copy of the *California State University Hayward Policies and Procedures for Five Year Reviews and Plans* (00-01 CAPR 7), sets of Academic Performance Review Statistics (covering 1998/99-2002/03) for the Geography BA/BS, Geography MA and Environmental Studies BA programs, the Self-Study, an earlier draft of the Five-Year Plan, and the Mission Statements of both the University and the Geography and Environmental Studies programs.

In his first on-site visit to the university in mid May 2004, Professor Starrs met with the Dean of the College of ALSS, Alden Reimonenq, the Geography and Environmental Studies Chair, Prof. David Larson, faculty members Prof. Karina Garbesi, Prof. Gary Li, Prof. Scott Stine and Prof. David Woo (Prof. Michael Lee was on sabbatical and traveling out of the country in Spring Qt.) The reviewer made a second visit to the university in early June to interview students, staff (Marcia Brown, ACS) and the Chair again, and to revisit the department's GIS lab and acquire more information about the programs.

Bound separately is his 25-page report, **Assessment of Department of Geography and Environmental Studies, California State University, Hayward**. As instructed in 00-01 CAPR 7, Prof. Starrs was asked to address the strengths as well as weaknesses of the Geography BA/BS, Geography MA and Environmental Studies BA programs, and offer suggestions for improvement of the programs, fulfillment of their respective missions and enhancement of their position with respect to system-wide and national trends.

Appendix C: Response to the External Reviewer's Report

Upon receiving Professor Starrs' report, the Chair, after consultation, responded in writing to the comments presented. Recommendations, concerns and issues raised by the External Reviewer were addressed in this response in light of the Mission Statements, program needs, the Plan, fiscal limitations and logistical issues, as detailed in 00-01 CAPR 7.

Assessment of Department of Geography and Environmental Studies
California State University Hayward
College of Arts, Letters, and Social Sciences

Review under Five-Year Plan

Completed by Prof. Paul F. Starrs,
University of Nevada, Reno

Appendix B

Review of the Department of Geography & Environmental Studies, CSU Hayward, undertaken in 2004

Evaluation — A Short Form

While a variety of assessments are salted into the rest of this report, it would be foolish not to take into account busy faculty and upper-level administration, so an abbreviated version of the larger review is deliverable in a few following paragraphs. For evaluations offered there is corroboration later, but if anything in particular catches your attention, I'm sympathetic that such reports need not be read like a Jane Austen novel, silently and respecting a sequence from beginning to end. The medium of "program review" allows for no such prose. But it is possible to reach quickly toward the heart of the matter.

Resource Scarcity: The Geography & Environmental Studies (G&ES) department at CSU Hayward has made do for some time. Like many a department within the CSU system, it's a bit starved for resources. That said, the current department chair has reassumed the role with a good deal of energy, made much of what's available, and I dare say, could be commended (or accused) of creating some opportunities from becalmed air. In comparable circumstances, other department chairs might be caterwauling; in G&ES that is pleasantly absent, and the faculty in the department seem as a whole quite grateful for the humor, vigor, and ingenuity in evidence when he returned to the teaching dais after an extended stint as Interim Dean of ALSS. With no negative reflection intended on the Interim Chair, Assoc. Prof. David Woo, whose abrupt ascendancy must have been a shock, the phrase routinely used to describe Dave Larson's return is as "a relief." When Larson came back, immediately required was catch-up work, including completion of the documents (Self-Study and a separate Five-Year Plan) that I have in large measure consulted in writing this review, along with notes and conversations from my visits. Overall faculty and student satisfaction with the state of things is clear.

Overload & Tripped Circuits: It would be a more guarded assessment that despite great accomplishments with a limited hand of cards, given the sorts of teaching and curriculum that is offered by Geography & Environmental Studies (G&ES), the department is demonstrably at least one, and possibly several, faculty positions short of where they ought to be to carry such a load of advising, classroom and field-based teaching, internships, and the usual research and committee requirements. There are reasons why the shortage is more real than initially apparent —

for a start, G&ES at this campus provides undergraduates with an internship- and field-based educational experience that is equaled only by a few of the best private and public universities (mostly private) in the U.S.; the University of Denver comes to mind (also a twinned department). There, as here, the undergraduates display enduring loyalty, and seem extraordinarily grateful for the nature, scope, and rigor of their degree. A formal commitment of the CSUH G&ES faculty to field-based education was made some time ago, and that has been supported through the last decade. Any six hour field-based experience requires three or four times that many hours to put the event together, making contacts, preparing maps and handouts, researching the sites, and arranging transport. There is also a distinctive emphasis, especially within the ES degree, on student internships. The point, here, has to do with "time," which must be lavished not just on students, but also on their private- or public-sector internship supervisors, and on the East Bay institutions that provide the internship and employment opportunities that students avail themselves of. Every element of this takes effort and contact-hours; it's not a matter of simply sending students out to "find a spot" and hearing back from them at the end of a quarter — a valuable internship experience is interactive and supervised.

A Troubling Cluster: Substantial G&ES innovation and assiduity in allaying student needs is the good news; the bad news is that maintenance of such an intensive effort requires extra faculty work. That commitment is evidently forthcoming. But in conversation with student-majors it is clear that the main reason that close attention to majors, given hobbled permanent staffing, is sustainable in G&ES at this campus has to do with a somewhat idiosyncratic parallel venture in undergraduate pedagogy in the form of a general education cluster. The freshman-sophomore cluster program, an experiment of sorts, has clearly and substantially reduced enrollments in geography and environmental studies courses (Geog 1000; ENVT 2000, for example), which in turn has trimmed the count of students who once came to G&ES in significant numbers as new majors after completing the introductory offerings. Such curriculum "cluster" efforts favor university degree programs already familiar to students from high school, and hurt majors more prominent at university than in K-12 life, such as geography. The majority of undergraduate students, nationwide, change majors in college, and often move on to fields that they find by luck or chance or thanks to good word of mouth in their first two years of higher education. Therefore, a closed cluster of classes actively penalizes majors outside of the "core," and although G&ES is represented in some clusters, the bias away from a major in environmental studies or geography is clear enough. Interdiction of the sophomore cluster, an action planned and underway, will allow students to follow their instincts to a broader range of fields, and this will pick up the pressure in numbers and demand for environmental studies and geography majors. The decline in undergraduate major numbers in G&ES tracks perfectly with a rise of the 1st/2nd year cluster program, and its redirection of students. That said, the

department has recognized attrition in student major numbers as a problem in the program review documents, and must address that with concrete action. With the department chair called to the Interim Deanship for an extended period, action was postponed, but the time to act is now. The healthiest university majors involve a teaching mix of general education and service courses AND courses that are more specifically for majors, and CSU Hayward would benefit from seeing more geography (B.A. or B.S.) and environmental studies majors. I would suggest that a significant range of G&ES courses be added back into the general education requirement.

Veteran Latin Americanist: In watching the department and considering geography & environmental studies at other campuses, I can even be more specific: There's an active need to replace a senior faculty member who has been FERP-ing with much deliberate speed, and his replacement should be someone capable of teaching geography — ideally a faculty member who might come in at a somewhat elevated rank — with strong field-based interests in Latin America. Anglophone North American, Asia, from stem to stern, and even Europe are covered, to a degree, by the existing faculty. But Latin America, with such huge implications for the East Bay, California, and the western hemisphere, is a null set, its substance dealt with by the occasional devoted lecturer or letter of appointment staff person. That is hardly sufficient, especially given funding and human resource circumstances that make long-term temporary teachers a staffing oxymoron. While Scott Stine does have some degree of South American experience, it's substantially in Patagonia, and the lessons for other parts of South and Central America are not directly transferable. And as for finding someone with an applied emphasis, I argue that a theoretician would be lost in and on this department; the person brought in should have active interests in the landscapes and residents of the Hispanic Americas, preferably with a sympathy and competence in historical geography or environmental studies. The demographics of California make the wisdom of such a choice self-evident; there is demand and it will grow. Therefore, getting staffing levels to an appropriate level would be wise. One position, the replacement for H. Eder, is essential. For anything beyond that, I would suggest close consultation between Dean Reimonenq and the department chair.

A Superfluity of Courses?: There are problems sustaining such a rich mix of undergraduate courses and faculty sub-specialties. The total number of faculty housed in the G&ES department is well below the CSU average, and the variety of courses taught and the sub-specialties covered in regularly scheduled offerings is considerably above the norm (see Self-Study documents). A department cannot be all things to all people, and may want to think about consolidating its majors: sustaining a B.A. and B.S. in geography, and a B.A. in environmental studies, along with an M.A. program that no one wants to let go, is if nothing else an administrative

burden. There are objections within the campus that make possible name changes difficult, with science departments holding onto the name “environmental science” and geographers recognizing the division between a foreign-language training in the B.A., and the more precise program of the B.S. in Geography. Faculty, however, have to make a costly time commitment to advising and sustaining the multiple majors. And there is ongoing confusion among students about just what degree to go toward, and students did speak of not being sure just where to go for which advising. Problems can also arise when major advisors take quarters off teaching. Bringing the faculty up to seven full-time, and eight-plus, including lecturers and part-time staff, would help allay some of this, as might provision of a permanent office staff person who can then steer students toward the appropriate office, person, major, and forms.

Continuing Leadership Development: Bringing in a replacement for Prof. Eder would play to several long-standing strengths of this department, more than adequately replace the incumbent, and will allow an almost instantaneous reduction of pressure in advising and outside-class student contact hours. In watching the faculty dynamic, I note that, were the person brought in somewhat senior in rank, there could be marked advantages. Having added options for an eventual department chair would be a good thing, not that there’s anything wrong with Dave Larson as chair — but Scott Stine is verifiably more interested in teaching and research than in any semblance of administration (his exact opinion about being department chair is not in question), and only very recently have the rest of the faculty been tenured and promoted. Establishing a somewhat larger range in the ladder-rank faculty would allow for added options, and will allow Larson at least some future respite, potentially, from the Chair’s duties — or make it possible for his administrative strengths to be spread to other areas of endeavor.

Drawing Graduate Students: An area to work on, in recruiting and graduate offerings, is the function of the G&ES graduate program. While it’s clear that the faculty each individually value the masters graduate program, and equally the students who come in through them, there is a collective unease about the degree, student presence, and long-term graduate student potential. Student numbers, applications for graduate admission, and such barometers as graduate seminar attendance have swung widely through recent years; if there is a minimum number of students required to run a graduate seminar, then student numbers may be under that cap. Everyone is actively interested in seeing good graduate students come to the CSU Hayward campus in environmental studies or geography, but there is far less confidence about the exact draw that the programs can exert on students, or the longer term prospects for supporting or sustaining student research. The absence of funds for funding graduate students is a continuing problem, but there is also a difficult market in which CSU Hayward in G&ES rests in a kind of void, geographically set

between a number of graduate programs (including the superb environmental science programs at Stanford, and the long-established PhD program in geography at UC Berkeley) that siphon off many of the willing. Further, the traditional emphasis, as I understand it, on smaller class sizes within the CSU system means that large courses with graduate teaching assistants would be a relative rarity. How to attract, enroll, support, keep and educate graduate students in G&ES needs to be addressed with some thoughtful repairs and solutions.

Faculty Activity: The faculty clearly puts a great deal of effort and interest into classroom teaching and regular contact with students, and their time commitment is not in question. The sorts of jobs that students have found upon graduation speak to formation of an effective net of connections between the faculty (and perhaps staff) and the community. These are not enough, however, to attract the kinds of potential graduate students who ought to be finding a home at the CSUH campus (or campuses). Faculty could profitably expand activity to present research more often in prominent regional environmental science and geography meetings. Although some might think that trifling and a waste of effort, there is no doubt that potential graduate students are attracted by presentations at Association of Pacific Coast Geographers or California Geographical Society meetings. The Self-Study and Five-Year Plan each solicit increased faculty research and some faculty meet that threshold. Others could increase activity, or at the very least, attend the meetings and serve as a presence and placeholder for the CSU Hayward – G&ES department. A pattern of crowd-pleasing presentations and significant overall faculty turnout at such meetings is a beacon to potential graduate students. Being there would show solidarity and what the Five-Year Plan refers to as “team spirit,” and bear witness to the health and interests of the graduate and undergraduate programs. Since the stable of incoming graduate students has been small in number, some form of significant action is desirable.

A Weak Web: Some of the problems, however, are more mundane: In my experience, more and more prospective graduate students do their research about potential schools on-line, and that is not a good thing for G&ES, right now. The CSUH presence is spare, even minimalist, and the word “welcoming” cannot be applied. All too well, I recognize that WWW-site design and maintenance is at best a kind of Hobson’s choice. Our own departmental WWW-site was a kind of shambles for a pair of years, after I turned it over to a faculty committee that neglected it. The problem is that Bay Area students contemplating continuing work in Geography or in Environmental Studies are as a rule a computer literate and graphic design-savvy bunch, and the graduate side of the G&ES department now is not well presented (more can be done, too, with the undergraduate side). A prevailing dullness in design was the case for the last year calendar year, and that was still true a week ago, when I last checked. There is a matter of “if you entice them, they will come,” but

broken links and dead pages void that hand. I strongly urge that significant resources be committed to updating the Web presence of the G&ES department, vanquishing the old versions from University servers (some of those still appear on search engines), and regular updates would move the department onto an active footing. I would also urge that this not be another item added to a faculty member's plate; faculty have enough to do, individually and collectively, or if it is to become a faculty responsibility, then resources from the University or College should be made available to compensate the department for the time taken away from teaching. Work from faculty publications and projects can also be featured. Enlivening a WWW site cannot be a fifth or twelfth priority in this age of updated pages, blogs and live-journals, java-scripted sites, highly interactive users, and digital photographs and images of department and research life.

Space and Time: Since the complicated shifting of G&ES across the campus in 2002 that took place to facilitate the Department of Communication Unification, G&ES faculty routinely make a long march to teach in cross-campus computer labs where the department was formerly located. A consolidation of G&ES into Robinson Hall is obviously desirable, as space becomes open, which will allow for much better and more efficient teaching. Further, because G&ES is a field with strong graphic requirements for teaching and colloquia and speaker series are dependent on 21st century technologies, Robinson classrooms used for lectures and labs ought to feature "smart" classroom facilities that represent at least corporate standard technology, if not exceeding that to serve as showcase of private sector innovations. Resources and hardware need to be moved to Robinson so faculty time is not lost in movement from one building to another. The technical side of G&ES requires that items such as application- and data-servers for Arc-Info drive all student computers, rather than have them on a stand-alone computer-by-computer (client) basis, and it's crucial that the servers at the very least be in the same building, separated at the hub behind a router or switch to maximize efficiency, rather than force communications across the campus, which greatly slows performance of the software through network lag. In other words, Robinson Hall should be the home for G&ES, rather than having it spread across the campus. The advantages are legion, and the current situation should be remedied as soon as it possibly can.

A Changing Grad Vision: Internally, links to the business program at CSU Hayward would be a good thing, perhaps even shifting the name of the M.A. program to something like "Geography and Environmental Management," which could have an active appeal to the international side of the one of the University's strongest and most visible programs. I understand that there is student and faculty interest, but that it has not been formalized in active initiatives. While there's every reason to hope that G&ES will draw continually more and better qualified graduate students to the programs, it's important, I think, to recognize that teaching a cadre of

qualified graduate students is important also to the faculty in G&ES, and therefore expanding the reach and applicability of some of the graduate courses offered could hardly hurt. Courses such as the graduate "Environmental Planning" course in geography (Geog 6750) both could and likely should be cross-listed with offerings in other departments, such as Public Administration.

Overall Substance: This is a department that takes its mission seriously. In the various CSU campuses, the role of geography in the 1970s and early 1980s was pursued differently. Some loaded up with faculty to create behemoth departments that then became top-heavy by the late 1980s, and those departments are in some cases facing difficult choices in the era of downsizing and changing student interests (data are in self-study documents). Some departments broadened their curricula, recognizing the desirability of managing an ecological and cultural environment that was being hard-pressed by the needs of a growing state such as California, and, indeed, by whole of the growing western United States region. To a degree, CSUH did that, with the creation of an effective environmental studies component, which today provides extremely important training for conventional and returning students in the area. The department added a variety of techniques to the core teaching fields in the 1990s, and faculty who came in under those changes are promoted and tenured; a stable core exists.

The department is well able to adapt to new opportunities within the University, although like many a department in the CSU system, and indeed, like higher education in the entire state of California, not so much good can be said of finances and faculty rewards in the last half-decade. Outsider editorializing, however, is unlikely to produce change. The likelihood is, if the G&ES program at CSU Hayward is allowed to pursue its core mission of teaching undergraduate and graduate students with a broad-based liberal arts and sciences education aimed at knowledge acquisition, information synthesis, and the acquisition of critical thinking skills, it will continue to be extremely valuable to the East Bay communities whence come so many of the G&ES students. The need for new resources is small, mostly in enabling and encouraging continued innovation, and bringing staffing up to full levels. There are problems, mostly with a temporary slippage in enrollment. I would suggest that the G&ES faculty be given that freedom, and the modest things that they ask for. They are not a strident lot, but the faculty is vigorous, prize-winning, and innovative, and could repay kindness many a time over.

[end summary assessment]

Review Context

The outside review of the CSU Hayward department of Geography and Environmental Studies is based on visits over a two week period in May 2004, on the 18th and 20th and again on the 28th for wrap-up. I spoke with ALSS Dean Alden Reimonenq, and I talked with the active faculty and staff during those visits, excepting for one faculty member, Michael D. Lee, who was then on leave. I have not heard from him since then, and so assume that there are no significant issues that need to be extended. I met with faculty in three other departments allied with G&ES, and discussed existing and further desirable linkages with them. Mostly emeritus professor Herbert Eder was not in evidence in the department, which I understand is the norm in his FERP status and with his appointed "outreach" duties. Some faculty members I managed to speak with several times, and we had opportunities to visit both formally and informally, with further contact made possible through e-mail, regular mail, or telephone contact, although that has actually been insignificant since those May visits.

The documents prepared in advance of my visit, which have been updated and extended since then, have been remarkably useful, and as completed, I'd consider them actually to be exemplary. As a kind of ongoing record of the history, ambitions, problems, curricular changes, and activities of the department, the "Five-Year Plan" and "Self-Study" are effective. The main delay has been in waiting for the completion of some of the "not yet completed" sections of both the "self-study" and the "five-year plan," but since those are now ready, this report can be completed and filed.

While a review of the department is somewhat overdue, according to the comments of Department Chair David Larson, the reasons for that delay are easily understood, and are spelled out in the start of the Self-Study document. In the main, Larson's seconding, under emergency circumstances, for a fairly length period to the Interim Deanship of the College Arts, Letters, and Social Sciences (ALSS) did leave a considerable gap, one that was particularly troubling because of the unfilled position left dangling by the reassignment in 1997 of senior faculty member Eder, who before Larson was called to the Dean's Office had begun acting as assistant/associate dean, and then turned to spending virtually all of his time on outreach without any provision of a full replacement position (his remnant teaching responsibility of 0.11 FTE was fulfilled at the Contra Costa Campus). That left a gap in expertise and experience for preparing exactly the sort of documents that are made available in these studies; their completion had to await Prof. Larson's return from the Tower; Prof. Eder still has not been replaced, though that should become an immediate priority, in fairness, for the department to thrive. Such fac-

ulty lacuna, however, explains, and to my mind would fully excuse, any delay in completion of the self-study and planning materials.

And to be fair, there is also a considerable degree of truth in some words in the department's self-study, at "1.3: Outcomes Assessment," where a somewhat exasperated but notably eloquent paragraph remarks that preparing all the reports and outcomes assessment documents in the world cannot help if a faculty is so overtaxed by regular teaching and advising duties that they are unable to begin thinking about really implementing innovative ideas. A small (as compared to other CSU geography departments; see data in "Self-Study") and committed faculty is often given to answering the single greatest felt needs: those of students. And to their credit, there is evidence that the faculty in Geography & Environmental Studies have considerably better than average success in this. Having been the Assessment Coordinator for two geography undergraduate degree programs (BS and BA), and two masters programs (M.S. and Masters in Land Use Planning Policy) at the University of Nevada, Reno, I am too well aware of the pressure from outside accreditation entities to provide formal assessment mechanisms, as I am equally well aware of just how time consuming the preparation of such criteria and learning outcome assessments can be — and how meager, from the view of departmental usability, are the truly substantive results. Of course, the professional University Assessment Staff are always quick to assure any and all that this "need not be so," and they are above any accusations of self-interest.

The confluence of Geography and Environmental Studies in the department name merits a quick note. They are a single department with two areas of focus and interest, originally taking in geography at the time of department origin, but expanding to include environmental studies — a field that was to a significant degree invented in California in the tumult of the early 1970s and Earth Day, and an area that has evolved into a profoundly inquisitive form of practical science. This pairing, of geography with either environmental studies or environmental science is by no means rare; at least three other departments in the San Francisco Bay Area include such combinations, though the dynamic is rarely at such ease as at the Hayward campus. Given that geography can be considered (and in some cases is lodged with) social sciences, humanities, business, earth science, biological science, and even the arts, an affiliation at CSUH of geography with environmental science is important; it gives a clear way-finding system and a sense of purpose. I would also add that the combination of technical interests of some of the faculty in Geographic Information Science (GISci) and the correlated work of other faculty in environmental studies means that there are areas of expertise and common goals shared by the faculty. These often prove useful to students, and are a helpful feature of the internship programs and the highly applied and field-oriented curriculum that has been crafted. The degrees offered include not just a B.A., but also a

B.S., and a B.A. in environmental studies, and a graduate M.A. degree. This puts a pretty fair administrative requirement on the department faculty, in terms of undergraduate student advising, in particular with an electronic student record-keeping system still in its early stages.

General Reaction

The Geography & Environmental Studies department at CSU Hayward evidences a committed and active faculty, a strong teaching program, though one somewhat hobbled by complex and sometimes overlapping administrative requirements and degree programs, and a core of interested undergraduate students. Students from outside the major find interesting and helpful elective offerings that often fulfill university requirements. Suggestions made even in the 1997 outside review, arguing for added opportunities to be opened for student activities and participation on the campus, do need to be worked on further, since the esprit de corps of the undergraduate students, though much helped by the G&ES field courses, is more episodic than reliable, and the graduate program most definitely needs TLC.

Although no university really likes to be referred to as a “commuter school,” there are aspects of that at the CSU Hayward campus. (The University of Nevada, Reno, where I teach is not so different.) Various means of bringing undergraduate and graduate students together are known, but making that happen requires the commitment of resources, including especially space that will allow students who have “come to school for the day” to have a pied-a-terre where they can study, meet, eat, consult, and pass time between classes. That can be written off as dilatory and a waste of resources — or it can be recognized as humane and a building of community and social capital. This is especially important for G&ES majors, who find the majors and fields (Geography B.A., B.S., ES-B.A., M.A.) to be overlapping and the demands shared. The 1997 program review had some specific suggestions that I understand were put in place, but the recent move to Robinson Hall has disrupted many of those, and that past review, with its suggestions for meeting space for students and opportunities for students to share time and thought, is hardly any less valid now than seven years ago.

The M.A. graduate program, a source of passing concern and specific suggestions even in 1997, requires active and inventive work; so do space and resource allocation questions. In an act designed to allow two departments to merge into a single “Communications” unit on the campus, G&ES moved out of Meiklejohn Hall and cross-campus into Robinson Hall, ceding its core office space there. This has created some opportunities in Robinson Hall, but the rough edges of the move, especially a split of crucial teaching resources now at essentially opposite sides of the CSU Hayward campus, have yet to be dealt with. And given that G&ES is strongly

committed to GIScience and teaching of related technical skills, the computers and computer labs that back that curriculum need to be brought home to Robinson, with “smart” classroom technology for lecture-hall teaching of 20-50 students. That said, G&ES is an amiable place for visitors, and therefore without any doubt for students, and the easy collegiality with faculty and staff of other departments is evident.

Existing Self-Evaluation Documents

The roster of documents provided is large, and includes all the items specified in 00-01 CAPR 7, including that somewhat Delphic Academic Senate document, itself. The Self-Study (1) and Plan (2) were complete enough that I could review all but the very latest data. I will assume a degree of reader familiarity with those documents, and where needed, will offer passing citations, instead of in-depth quotations. I also have a variety of additional documents, from course syllabi and faculty publications to handouts and the text of past outside program reviews. These are all most helpful.

Program Evaluation

Mission & Vision

The mission and vision of Geography & Environmental Studies turns around a liberal arts education. There is no single mission & vision statement for the entire department. Instead, each degree has its separate mission. The ES bachelor of arts degree is aimed at specific problem-solving skills, specializing in helping students with critical thinking, analytical tools, field experience, and computer techniques. The distinction between the Geography B.A. and B.S. degrees is really a matter of curriculum emphasis, with the bachelor of arts degree aimed at human-cultural concerns, and the bachelor of science degree turned toward physical and technical aspects of the discipline. Providing students with a significant global knowledge and ability to assess problems in context is a feature of all majors.

There can be a question of just how many degrees are really needed, and whether it's preferable to have three degrees (and a fourth M.A. degree), or to consolidate, which would simplify choices for students into perhaps two undergraduate degrees: One in environmental studies, another in geography. One problem with this is that it is typical for the “e.s.” degree to be an abbreviation for environmental sciences, rather than studies, and for the degree to be a B.S., rather than a B.A.; the more typical departmental offering might be a B.A. in Geography (with a foreign language requirement), a B.S. in Geography, with an emphasis on technical or physical geography, and a B.S. in Environmental Science. I'm not bringing this up

It could well be argued that G&ES has diverse abilities; it can be many things, reasonably well, though emphasizing certain directions would make the department more original and attract more attention. Or the department can specialize, and be a few things, very very well, but recognize that going in a specific direction would leave other emphases or specialties by the wayside. For example within the G&ES department now, the emphasis in GIS / GISci and hoped-for GPS training tends to conceive of their use in physical geography projects. But training could as easily go toward geodemographics and marketing strategies, or toward epidemiology or habitat evaluation, toward civil engineering or urban and regional planning, or in the direction of park and reserve management. I would urge that the choices that are to be made be conscious and deliberate ones, rather than accidents or default positions. These are actions that will have significant implications for the decade ahead.

Faculty Demographics & Profile

The faculty has changed in some significant ways from 1997, at the writing of the last outside assessment report. All faculty are tenured and promoted. Karina Garbesi, a highly successful hire, administers the environmental studies major, and has far more than replaced Tina Kennedy, who left in 1997 to go to Northern Arizona University where she had long ago completed a degree and retained roots. A degree of consternation generated when Dave Larson went to fill in at the Dean's Office for almost 18 months abated with his return as the Department Chair. The aftermath of the move to Robinson Hall has eased, and an awareness of what needs to be done to make Robinson a home and haven, rather than temporary housing, has begun to develop.

The G&ES faculty is distributed fairly tightly along an eleven year PhD degree path, from 1987 (Stine, UC Berkeley) to 1997 (Li, SUNY Buffalo), but ages align on a somewhat broader range, from mid-50s to late 30s. There are no assistant professors, at this point, and two faculty (Stine and Larson) are full professors. Left off this list is Herb Eder (PhD 1963, UCLA), who I believe completes his FERP transition this year, and who should be replaced, I argue by another Latin Americanist, ideally at a relatively senior level.

An assessment of the faculty is always a tricky business, given the varying sorts of cultures afloat, and because obviously a university has its own internal standards that are in effect, expectations that characterize high-load versus low-load schools, for instance. The list of CSU Hayward G&ES faculty specialties and interests is reasonably typical of a 21st century geography and environmental studies department, and faculty evidences varying degrees of activities.

to cause trouble, but to reflect on the choices that are available — I assume that the range of degrees offered in G&ES represents two things: a long pattern of discussion within the Department, and second, what is deemed possible or acceptable, given divisions along various lines at CSUH. Considering that the ES B.A. emphasizes “politics, law, economics, biology, chemistry, geography, and geology,” there is certainly a good bit of science in the mix. Given that politics is the art of the possible, I leave it up to the G&ES family to make their preferences known; I simply observe that, given the considerable evidence marshaled in the “Self-Study,” the current pattern of degrees offered in the mission statement is not the only way that a collective mission might be met.

It could actually be useful for the faculty to sit down and spell out what elements of the three separate degree programs (four, if the Geography BA/BS degrees are split out) are held in common. I do know that nomenclature, however, is something that sets its fangs deep and dear within a faculty, and recognize that maybe such roads are best left unpaved.

Sub-disciplines & Specialties

The Self-Study documents (at length) faculty self-identification within the Association of American Geographers specialty groups, and concludes that the faculty is unusually diverse in interests and specialties. In fact, G&ES also reflects diversity in the several degrees that are made available to undergraduate students, and there is good regional coverage in course offerings. The question to be asked is how well the faculty meets the needs of majors, other departments at CSUH, and geography as a field or discipline. The answer is “pretty well,” to appearances. It is relatively balanced, and can go in any desirable direction, at this point.

But just how G&ES is going to aim its sights for the next decade is a question that could profitably be explored. Will the department look inward, primarily tending its majors (who are declining in number, though hopefully only on a temporary basis), or will it work strongly at building the graduate M.A. program? Or should the department seek a closer coordination with the University and Liberal Studies core programs, which might increase enrollments and the student-faculty ratio? Or, given the links of some of the technical sides of geography with work in science and also in business and international marketing, should G&ES look especially toward service courses that meet needs in those fields? These are questions that bring with them complicated skeins of commitment, and I do not sense any unanimity or even any direction within the faculty on these matters. It is perhaps something that is more readily reached through internal discussion than through blunter instruments like University-mandated Policy and Procedure documents.

In terms of teaching strengths, I have a good sense of how well the faculty is meeting its collective teaching goal. There is substantial student satisfaction with how their teachers attend to their needs. By the numbers, and for some years, the G&ES faculty is consistently among the best departments in ALSS, by standards of conventional teaching evaluations. However, they've also maintained very high standards and expectations of students, and the high esteem in which G&ES teaching is held is balanced by a tough overall GPA for students exiting courses. In other words, students value their experience taking G&ES courses, even though the grading is nearly always rigorous and even difficult.

The faculty, indeed, seem to be held in remarkably clear esteem, and I would expect further recognition of their teaching acumen. Prof. Stine has been nominated for recognition as the university's outstanding professor (and ought to have a good chance at that.) Prof. Larson has on more than one occasion had the highest overall teaching evaluations in the entire college. Prof. Michael Lee is a superior teacher, and Prof. Karina Garbesi provides the sort of experience that undergraduate students, including especially women, later explain has "changed their life." This is deep and complex praise. The overall teaching excellence is beyond question.

Of perhaps more concern is the complicated matter of faculty activity on the research side. It was an expressed goal of the department, even in its response to the 1997 review, to boost publishing and presentations from the G&ES faculty. To a degree, that has succeeded, so far as I can note, but having watched faculty not just at my own university, but in several outside institutions where I have done program reviews, it is always difficult to balance short-term student needs with a faculty member's desire to get something done "eventually." The immediacy of a knock at the office door can take precedence over cloistered research and writing time. The research productivity of the faculty whose records I have seen is acceptable. It could be better, and there are certainly means of boosting that productivity that I would urge on the faculty individually and as a whole: writing book reviews for academic journals; making presentations at regional professional meetings; becoming more active at the margins of trade-based organizations and working with them; developing contract work that can, in turn, become further research opportunities, perhaps with publishing implications; developing applied modules for ESRI's Arc-Info software, which can be used not just here, but by any user in the ESRI extended family. The crucial thing is to start somewhere.

Is it desirable to bolster the research profile of the G&ES faculty? Some are in good shape, personally. But for the whole of the department, and that means “in its public face,” I’m inclined to say “yes,” that there needs to be more research and more active involvement in the profession, and that is for the particular good of the teaching program. I do not mean for that to be paradoxical — experience strongly suggests that potential graduate students (to take one example), and in some cases I’ve known, the undergraduate student of rare foresight — actually choose where to go on the basis of presentations they’ve seen and conversations that they have had at various public events and professional meetings. Students already within a university can choose to switch majors to fields where they perceive faculty to be doing research that is of interest that they can participate in, and which brings them into the fray. Although great teaching counts for a lot, it’s not everything, and I would suggest that the Dean recognize that publication and public outreach is itself a kind of sophisticated teaching, outside the classroom setting, and reward it as such.

With WWW resources and Google searches being what they are, students routinely know far more about the faculty whose courses they are contemplating taking than faculty know about one another, even after years of lunching out. Students will seek out venues where their potential teachers might be, to see them in action. There can be advantages to this. The Association of Pacific Coast Geographers, for example, meets regularly in various parts of the western United States, but it has been at least five or six years since a CSUH faculty member went to one — and that was Prof. Eder, who presented no research. The California Geographical Society meets annually, and has a vigorous group (and interesting meeting sites, Yosemite Valley, this year).

Students are attracted to study with faculty who they see in action and want to work more with — and an absence of visibility offers one possible reason that the CSU Hayward graduate program has met with something of a numerical decline; perhaps a falloff in the sense of excitement, currency, and relevance. The Geological Society of America or Friends of the Pleistocene meetings could equally attract, or so could public lectures to the California Academy of Science, or other professional meetings in GIS or physical geography (the ESRI annual conference, or any of the many regional GIS conferences within California). For any but the finest of graduate programs, finding good graduate students requires faculty effort and activity that is not necessarily in evidence among the G&ES faculty right now. That can be remedied, and in distinctive ways that will yield benefits, but the whole venture is an investment. The payback comes with more and better graduate students, and the enjoyment of teaching them. It’s the rarest of things for a great graduate prospect to put an application and transcript in play with no notice or out of the blue — more usually, there is good bit of research and prior contact.

Students go where they are attracted, and a bright light is more attractive than a shaded window; I would suggest that a suitable faculty commitment to presenting research would help remedy some of the demographic dips in student numbers. That would also serve to excite some larger degree of undergraduate interest, and it is likely that CSU Hayward will find the same interest that other CSU campuses have found in enabling and assisting undergraduate research — or bringing students along as cooperators with faculty research projects.

Teaching Load

The teaching load at CSU Hayward for G&ES faculty is high, even for faculty within the CSU system. It's high in particular because of the large number of original courses that are taught each quarter, as opposed to a single course taught through several sections (though there is often one or more of those). Further, field-based courses take more time to teach and prepare than three-hour-a-week lecture courses, and offer a good bit more strain on all participants, if also more pleasure. Faculty average about three courses (or sections) per quarter, and the diversity of courses taught is high — 3, 3, 3, or 36 WTU per year. Offerings in both Geography and Environmental Studies are taught, and the numbers of students are kept down by the classroom size-cap, but are still sufficiently large to have an effect on the sorts of examinations, written work, and expectations and interactions that a professor can expect with students.

Faculty who make compelling cases can receive some release time to pursue further training or to undertake research, and the three-course load, while onerous, is still well below that in institutions that have no research expectation at all (and well above that in other institutions with more demanding graduate advising).

As is often the case, a main victim in this attempt to establish a balance between teaching loads, courses that “must be covered,” and College and University expectations is the graduate seminar, which is rightly identified as particularly hard-hit in some of the Self-Study pages. While the faculty have sought to offer at least a single departmental graduate seminar each quarter, that is still in the experimental phase, and with limited graduate admissions and a small number of active graduate students, there is a chicken-and-egg problem: Graduate students may not be attracted to a program unless there are interesting and effective graduate seminars, and there are no such seminars unless there is a critical mass of incoming graduate students. This is a quandary that has to be worked out: Faculty are credited with teaching a graduate seminar, but that does have the effect of lowering FTES for that quarter, and there are Administration expectations that a department will keep up its end of the FTES balance.

Student-Faculty Ratio

With a faculty of six full-time faculty (and one all but emeritus), and non-tenure-track faculty ranging in presence from 0.8 to 1.27 FTE over the last several years, total faculty numbers hover at around 7. The student-faculty ratio for full-time faculty ranges from 13.48 (1998) to 18.59 (2000), with SFR for part time faculty generally higher than that. Average section size is typically in the low 20s, and the main problem the department faces is a reduced number of undergraduate majors and declining degrees granted. This is at the smaller range within CSU; data are provided in the Self-Study.

That said, it bears keeping in mind that several of the courses offered in G&ES are essentially field-based. Such is very true of GEOG 3400, 3405, 4125, 4325, ENVT 4300, and it can be true of GEOG 4330, 4350, 4355, and can include a number of other courses with significant field components. These can pull apparent total student course numbers downward, since field-based teaching involves added costs and mandatory trips. For good students, the field components are an exciting element of academic and intellectual life, but they also represent a larger commitment of time, in preparation and trip development, for the instructor of a class. However, I agree wholeheartedly with my predecessor in 1997, Prof. Larry Price, who wrote the outside program review then: The excitement generated by field experiences of students working beyond the university campus is among the great prizes of our teaching lives, and nothing that should ever be sold short.

Any concerns about student-faculty ratio are less, in my view, about the in-class ratio, and more about the contact hours outside of class that are needed to maintain (and attract) majors. Why the concern with majors? Because according to the comments that I've heard from G&ES faculty, the vast majority of students who do take field-experience based courses are actually majors. That highly significant, and to my mind, incredibly important, component of the undergraduate experience is tied to majors in the several undergraduate degree programs that G&ES maintains. As major numbers decrease, the sustenance of those courses is called into question — will student numbers be sufficient to allow a field course to be run?

But an increase in the number of undergraduate students in the G&ES majors will also increase requirements for advising, record-keeping, and the like. Undergraduate students have clear needs.

Undergraduate Program

The undergraduate program is, in fact, three separate ones, though linked: the B.A. in Geography, the B.S. in Geography, and the B.A. in Environmental Studies. They are ably documented in the materials included with the "Self-Study" and the "Five-Year Plan," and there is no significant problem with them. They actually are fairly efficient documents, with careful checklists of courses to be taken in a given quarter, in what sequence, and with careful tracking. Those documents are spelled out in the campus catalogue, which is accessible on the Web. A fairly large number of courses, for each of the three majors (and their subset program of electives), includes work outside of G&ES. It does occur to me that courses may be taught with much greater reliability at CSU Hayward than at many other universities, including my own; we have sometimes found such documents more hopeful than helpful, because of cancelled classes, faculty on leave, or various other events that get in the way of other departments teaching courses that we expect them to offer. Some departments discover that they have to hustle and find alternatives when courses that they require or strongly recommend that students take fall from the schedule of classes. Some existing courses in the G&ES catalogue are cross-listed, such as the Principles of Geomorphology course, offered through Geology, or the Biogeography course, through Biology. This may be less a problem here, but is something to keep in mind: Depending on other departments to offer courses deemed essential to the internal operation of a major is always a bit of risk.

What the "Five-Year Plan" does offer is an excellent sense of future direction, with centralized electronic degree checking, databases of student names and contact information, in-house guides to majors and career opportunities within those major degrees, and maintenance of a dossier and undergraduate portfolio. These are all superb steps, although as the Five-Year Plan notes, several of these steps are in the planning, rather than in the realization, stages, and implementation will involve delays. There's a great deal done for majors, within G&ES.

Graduate Program

The graduate M.A. program poses an interesting problem for the department. Everyone that I spoke with believes in it, wants to see it succeed, but the program does not have the bedload of students or of courses or support monies to keep it going at a truly effective strength. The mission statement of the graduate program is the only part of the G&ES program that shows a very strong linkage to the department's fairly remote past — an emphasis on geographic thought and the history and philosophy of geography that would have been particularly dear to Prof. William Thomas, who was for two decades a mainstay of the department, after his triumphant role in the "Man's Role in Changing the Face of the Earth" conference in 1956. The main purpose of the M.A. program is workforce preparation or for doctoral studies at a major research institution, and this would mean essentially to

offer a stopgap education for those who prefer not to stray far from home at a particular time in their career or education. There's a pronounced need for such training and education, but it is a less than ambitious aim for a masters degree program.

I would urge faculty to revisit the purposes of the graduate program — it could take on any of a number of more exciting forms, allying itself with GIS, for example, or bringing in students with Bay Area-related research problems and questions, or providing training in new and better forms of spatial analysis, or looking at land use or energy or environmental quality or planning questions with an eye toward solutions in the near future. Even an analysis of historical landscapes would be an appropriate change in conception (historical GIS work is becoming increasingly common and the results ever more significant) — but any of those ideas proffers a different emphasis than what's offered in the master's degree mission statement.

Geography interlacing with Environmental Studies // Geography & "Sciences"

Some programs that I know of where geography and environmental studies or sciences cohabit within a department find the mix troubling, and the faculty seem hardly able to cross an invisible line sketched down the middle of the hall — “your half, my half,” as famously portrayed in the Bill Cosby routine. But at CSUH, the relations seem amicable and more, quite productive. The arrival of GIS / GISci within the department forms a suitable glue, in part, since those techniques, like traditional cartography itself, join rather than sunder.

If there is a concern, and I'm not certain that there needs to be, it turns around the relationship of G&ES with other parts of the campus. Faculty spoke to me of “restraints” placed on potential course offerings, with colleges other than ALSS, and departments within them, territorially declining to allow certain courses or program names to be used. This is not unknown at larger universities, but is never a pretty sight. There is an enduring oddity: environmental studies (or sciences) is among the most vibrant, integrative, and problem-solving disciplines in academe. And geography can legitimately be found organized among the social sciences, liberal arts, humanities, earth sciences, biological sciences, in colleges of business and even medicine, and it routinely is found in colleges of natural resources. To clip the wings of G&ES on the grounds of baser disciplinary prejudice would seem invidious, at the very least. If there are problems with a G&ES initiative and campus nomenclature, that could perhaps be an area where deans could meet and reach a suitable end, rather than continue strife.

GIS / GIScience

A wholly suitable reason for G&ES to be encouraged to participate with a number of programs across the campus has simply to do with geographic information systems, or as many practitioners prefer to call it now, geographic information science. The faculty can explain this better than I, but in telegraphic form, GISci takes complex computer-based maps, housed on computers, and allows simultaneous and interrelated analysis of the quantitative and spatial data. Someone attempting to find habitat for wild boars in the Coast Ranges, for example, could take (or create) existing layers of data: water sources or hydrology, soil types, slopes, aspects, tree cover and tree species, distance from houses, land ownership status (public or private, park or preserve), number of boars taken in the last ten years. All these can then be analyzed simultaneously, to create a map — and a model — showing the result. This example was biological (or wildlife-related), but the example could as easily be historical (What conditions defined the Chicago Fire?), or epidemiological (What connections link victims of an influenza outbreak?), or anthropological (What traits separate an archaeological site from a neighboring, but unrelated, site?), or business related (Where is the best place to launch a test marketing program for cereal boxes with postmodern poetry on the back?).

Technology within a program is always a genii. It can be seen as offering technology instead of understanding, and in some places, does (but not in G&ES). The technology is somewhat costly, but the fact is, environmental scientists and geographers have always had equipment costs, since their primary tool is data collection and its display, and deans and the directors of computer labs need to pony up. Like it or not, the 21st century is about appropriate technology being brought to bear on various problems, and G&ES is on that front line. When a journal of global repute such as *Nature* notes (22 Jan 2004) that the fastest growing fields in the next century will be nanotechnology, biotechnology, and geomatics, the word “geomatics” refers directly to GISci and its technology.

For CSU Hayward to live up to its renaming, it will need to sustain its teaching in GISci, and familiarize students with that technology. There will need to be some significant innovations, capital commitments, and a realignment of computer labs from Meiklejohn to Robinson Hall — or at least I would so argue. Two faculty members, tenured, have some strengths with Arc-Info, and connections to ESRI, the main purveyor of GISci / GIS software; Gary Li is an ESRI certified instructor. They will benefit with regular updates in training, and attendance at Arc-Info regional user group meetings. The good news is that there seems to be plenty of motion and innovation within the G&ES faculty, and within the campus, as construction of the new Business & Technology Center begins, G&ES ought to be — I would hope — on the ground floor of space and capital reallocation.

[end of Program Evaluation; Recommendations follow]

Recommendations

Extracted from the text above, these are condensed into concrete suggestions:

Faculty

1. Fill the Latin Americanist line, ideally with a tenured senior faculty member who can apprentice in the department chair's role.
2. Encourage faculty presentations in conferences, especially local conferences with a more general draw, where potential graduate students can see what CSU-Hayward has to offer. It has been too long.
3. Fund faculty training and continuing education in GISci and GIS techniques, so this important technology is not only taught at CSUH, but is something that all faculty can have at least passing familiarity with. Broaden reach to other fields at CSUH, including graduate education in GISci, and encourage faculty as appropriate to attend user conferences and cement the CSU-Hayward presence.
4. What can be perceived as problems of the graduate program are, in fact, problems with overly-busy faculty, holding together a very ambitious undergraduate course list. It is time to let some courses, even favored ones, go, so the faculty as a whole can take greater collective and individual responsibility for the mentoring and teaching of graduate students. "Which" courses can go is an internal question, but I'd urge a pruning of courses to a strong core. Is both a B.A. and a B.S. in Geography essential? Would there be savings in time and effort if there were consolidation or renaming? A curriculum discussion should be undertaken with overall department health — and its shape for the future, with a fully tenured faculty — in mind.
5. Field-based courses are a deep tradition at the CSUH campus, and it would be a pity to see them abate. Some faculty have cut back or eliminated field courses — a pity. I would argue that, time commitment aside, it's the most distinctive element in the G&ES curriculum, and I would suggest making that a signal feature of the undergraduate experience. Student dyspepsia about going to the field will abate. If faculty can be credited with extra credit for teaching field-based courses, do so.
6. If there is another faculty line in the offing — aside from the Eder replacement — it's hard to see that, as one faculty member suggests in the Five-Year Plan, "a faculty member with expertise in environmental engineering or sciences would serve us well." Building on existing core strengths would likely be much better — I'd argue for strength in environmental studies, or

better yet, aiming for someone with technical skills, but also a strong competence in environmental history or historical geography. Although targeting is touchy, an ideal candidate for the mix might be a woman with a strong and relatively general capability in geography. Were there also experience with GIS, then all the better.

In the next two decades, geography and environmental studies/science faculty, like academics generally, can no longer live like lone wolves trolling the archive; a more general competence and ability to work with various technologies will be essential. An historian had better be able to thread sophisticated searches through on-line article databases; the political scientist should work not just voting or attitudinal research, but also risk, trend, and hazard studies, and display them on interactive maps. Faculty in geography and environmental studies will be the information architects who weld these kinds of systems together, just as great swooping arrows in the late 20th century denominated patterns of movement and the circulation of ideas and capital, in the work of many of the best geographers. The melding of technology, or technique, with knowledge and critical studies is where everything is going.

Graduate Program / Students

1. Revamp the mission – vision of the graduate program; it's outdated. In fact, I think a significant faculty conclave, organized to formulate a new mission for the graduate program, is called for. There needs to be a sense of proprietorship and responsibility brought into the graduate program, and with that, direct commitment.
2. The graduate program needs numbers of students and faculty resources: seminars, space for the graduate students to meet and work, contact time with faculty. These come at a real cost, including an expense to undergraduate teaching, and the goals shared by the G&ES faculty with a formal agreement between the dean and department chair. Now is no time for half measures. A lingering graduate program needs resources or quietus.
3. Advertise successes in the graduate and undergraduate program — some of the most distinguished faculty in North American geography had their start, or earned a masters degree, at CSUH. It's time to pull in any markers.
4. Since Prof. Eder has been involved in "outreach" for the last several years, he could perhaps donate substantial and conspicuous time as an emeritus to recruiting suitable graduate students for the CSU-Hayward campus that has sustained him for three-plus decades.

5. Involve graduate students in faculty research. Publishing and presenting with graduate students, mentoring and supporting them, is good for the faculty, and for the students. Surely there is some seed money for assisting in such research. The same can be said of undergraduate research.
6. Support graduate student attendance, as well, at regional meetings, either through department funds, through graduate students association funds, or with help from the ALSS Dean's Office. This is an inexpensive item. Alumni might also be targeted in a specific fund-raising program to help UG / Graduate students attend these meetings, and this has the pleasant added potential to generate internships and other forms of departmental support.

Students & Records

1. Completion and approval of the revamped Environmental Studies program. I believe it is scheduled to go before the Curriculum Committee in Spring 2005, and should make the major stronger and more coherent. The faculty is quite happy with the results.
2. With the furloughing of the second year student cluster, some geography and environmental studies courses should be placed within the General Education ranks:

Geog 2100 (Physical Geog) -- Science GE
 Geog 2300 (Cultural Geog) -- Social Science GE
 Geog 2400 (World Development) -- Social Science GE
 Envt 2000 (Intro to Environment) -- Science GE

I would also recommend that Geog 2200 (Geography of Asian Americans) and GEOG 2310 (Economic and Resource Geography) be converted to upper division (3000-level) courses with GE designation.

3. The position of secretary/office manager has not been stable within G&ES. This is a crucial post, and should be treated by Administration as such. Faculty are not suitable office personnel or database managers, and it is unwise to use them as such. A professional office manager provides a face and continuity within a department, and needs suitable space, resources, and training. The needs of the office manager must be sought out and provided for; the stable "front-office" person is better than invaluable.
4. The Self-Study and Five-Year Plan include a number of items that are planned, but not completed, in terms of record keeping, degree checks, and communications with undergraduate students. These should be pushed ahead, as resources permit.

5. Some simplification of the curriculum in any of the three undergraduate majors could ease the record keeping issue. Many universities are implementing centralized undergraduate records, which students can themselves access through a secure system. I assume that is in the offing at CSUH, if not in place through DegreeWorks, but the G&ES degrees should be implemented in that system so students know where they are in their pursuit of a degree. This will eliminate some nagging paper record keeping.
6. Some allotted space for students needs to be restored. For majors of medium or small size the provision of community-sustaining space is not just a kindness, it actively builds the major. This space was lost in the transition from Meiklejohn to Robinson.

Space & Equipment

1. Consolidate Geography & Environmental Studies within Robinson Hall.
2. Close consultation with all G&ES professors about equipment needs should generate a categorized list of needs for equipment, and for space. While an outsider can envision some of these, it obviously requires the hands-on contact of faculty in Robinson Hall to assess the possible.
3. Smart classroom space, linked at gigahertz network speed to the G&ES GIS servers, should be provided. Environmental studies and geography are the most graphics-dependent of all departments, on a scale with art history and anthropology, and should have requisite teaching space. For graduate seminars, a seminar room equipped at least with a permanent digital data projector is appropriate and desirable; so is a wireless network within the department so undergraduate and graduate students can link into the network from laptops. Absent that, students will find working within the department difficult.
4. All equipment and space desirable for comfortable and efficient teaching of GIS / GISci should be provided, with a regular cycle of replacement built into the equipment provision (my university figures on three years; some use four).
5. Field equipment, as necessary, should be provided to the department through equipment replacement funds. Tools need to be taught, and without tools, a virtual education is going to serve students poorly. For going to the field, whether urban or rural, there should be a reasonable body of equipment for students to use and learn from.
6. Space for undergraduate students needs to be found, and a separate space for graduate students, within the confines of Robinson Hall. This should be

not just “any” space, but good space, so students can be welcomed there and find it a home away from home.

7. Revise the department’s WWW presence; the bare-bones aspect that it currently has tells little about the department, its faculty, faculty activities and specialties, and doesn’t do the place the honor that it deserves. Resources for making this happen might well have to come from on high.

[end of Recommendations]

— thank you, it’s been a privilege.