# Signature Page

**Natural History/Field-2008**

## I. Team Members

<table>
<thead>
<tr>
<th>Name</th>
<th>Specialty</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joe Mueller</td>
<td>Ecology, marine biology, field biology, organismal biology</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## II. Program Review Committee

<table>
<thead>
<tr>
<th>Name</th>
<th>Committee (Chairs)</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Derek Wilson</td>
<td>Chair of Budget Committee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chris Schultz</td>
<td>Curriculum Committee Chair</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blaze Woodlief</td>
<td>Educational Planning Committee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Erik Dunmire</td>
<td>Facilities Committee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yolanda Bellisimo</td>
<td>Institutional Planning Committee/</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Academic Senate President</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nick Chang</td>
<td>Instructional Equipment Committee</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(and Other Expenses)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sara Mckinnon</td>
<td>SLO Coordinator and Chair of The Program</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Review Committee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Joetta Scott</td>
<td>Student Access and Success Committee</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## III. Vice President of Academic Affairs

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nick Chang</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## IV. Board of Trustees President

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phillip Kranenburg</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
I. Program Definition

The Natural History Certificate is designed to prepare students broadly in the area of field and organismal biology, with balanced exposure to plant and animal classification, ecology/field biology and earth science. This training will solidly prepare students for teaching outdoor science to elementary school students and the public. The program was developed with the express purpose of providing the skills and knowledge to prepare students to become competent field biologists working at the organismal level of community or ecosystem ecology. The emphasis on reductionist approaches in biological education throughout the world is rapidly eliminating the study of taxonomic relationships and ecological interactions in favor of a greater focus on molecular and cellular processes. Such a focus works well for those studying physiological or molecular mechanisms, but for students who plan on careers in more holistic fields, such training provides inadequate knowledge to recognize species or to understand the complexity of biotic interactions. Additionally, emerging problems, such as the spread of exotic diseases, the damage and costs of invasive species, extinction, and general environmental degradation (and a general declining quality of life) indicate an acute need for biologists who can view issues from a broad perspective. This is not to suggest that reductionist science has no role in the training of students in this program. Students have both opportunities and expectations to become competent in the fundamental understanding of molecular biology and genetics. The combination of earth sciences with organismal biology enables students to embrace the exponential increase in knowledge and understanding of biological systems required to address contemporary problems. This program provides a solid foundation and framework onto which students can build. The Natural History Program also provides students with skills that form an essential foundation for their chosen careers and the background needed to continue their learning once they leave the college. It also directly addresses the supposed conflicts between religion and science and trains students to be objective decision makers, using their knowledge and a scientific approach when critical issues must be resolved. The program exposes students to the rapid growth in science and the fact that one must continue to learn if one is to utilize that knowledge to best benefit themselves, humankind, and the environment on which we all depend.

II. Program Purpose

<table>
<thead>
<tr>
<th>Primary Goal:</th>
<th>Secondary Goal:</th>
<th>Other Goal:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lifelong Learning</td>
<td>Career/Work Training</td>
<td>Degree/Transfer</td>
</tr>
</tbody>
</table>

Primary and Secondary Goals Description:

Today's children spend half as much time outside as they did just 20 years ago and on average, spend six and a half hours every day plugged into electronic media. Hands on environmental education is a solution to this growing trend of "nature deficit disorder." The Natural History Program goals are mostly directed towards lifelong learners with significant amount of career/work training. Some students working towards a degree in biology use these courses to supplement their work towards a degree. This program addresses the need to educate educators in outdoor education. The No Child Left Inside Act of 2008, H.R. 3036, created a new federal environmental grant program for states to develop environmental literacy programs and support teacher training in environmental/outdoor education. Our program is well positioned to serve the growing need for outdoor education.

III. Students Served

Science/environmental education institution docents; professional nature photographers; nature journalists; elementary school teachers; parents who home school their children; national, state and county park naturalist/rangers/staff.

IV. Program History

The Natural History Program was designed in 1995 to give students the unique opportunity to take diverse array of courses that concentrate on the nonhuman aspect of biology. Most courses concentrate on a holistic approach to science rather than a reductionist view commonly encountered in most science courses. As the program developed three unexpected outcomes developed. It was found that a broad education in natural history and field studies is useful in giving biology majors the edge in competing for graduate and employment positions. Also it has been observed that the field courses spark the interests in young students to such a degree that they decide to continue on as biology majors and transfer to institutions of higher learning. Lastly, it was found that a significant number of life long learners decided to change their careers because of their experience in the program. In summary: this program changes lives.

IMPORTANT NEW INFORMATION. The No Child Left Inside Act of 2008, H.R. 3036, created a new federal environmental grant program for states to develop environmental literacy programs and support teacher training in environmental/outdoor education. Our program is well positioned to serve the growing need for outdoor education.

V. Attachments

http://programreview.marin.edu/2008/POReport.jsp (1 of 2)
Program Review Questions Natural History Program. Marin's environment is particularly well suited for outdoor education. We have a biologically diverse environment with about 20 different ecological communities. Marin has more public lands (federal and state parks as well as county open space) per capita than any metropolitan area in the nation. Marin's populace is environmentally progressive. The Natural History program is appropriate for the unusually high number of park rangers, preserve docents, environmentally concerned school teachers, and an environmentally aware population. HOW CAN WE ADVERTISE THE PROGRAM OFFERINGS EFFECTIVELY AND EFFICIENTLY TARGET PROSPECTIVE PARTICIPANTS? Field courses, by their vary nature, can present hazardous situations. Transporting students or being involved with transporting students can expose the district and it's employees to being liable for their safety. WHAT EXACTLY IS THE DISTRICT'S LIABILITY WHEN TRANSPORTING STUDENTS OR ALLOWING THEM TO TRANSPORT THEMSELVES? WHAT LIABILITY DO INSTRUCTORS INCUR? HOW CAN WE STREAMLINE THE TRANSPORTATION PROCESS AND MAKE IT EASY FOR NEW TEACHERS TO USE? HOW CAN WE SCREEN PROSPECTIVE FIELD COURSE PARTICIPANTS IN SUCH A WAY THAT INSURES THEIR RIGHTS BUT ALLOWS FOR THEIR SAFETY AND THE SAFETY OF OTHERS? HOW CAN WE SCREEN PROSPECTIVE FIELD COURSE PARTICIPANTS IN SUCH A WAY THAT INSURES THEIR RIGHTS BUT ALLOWS FOR THEIR SAFETY AND THE SAFETY OF OTHERS? HOW CAN WE SCREEN PROSPECTIVE FIELD COURSE PARTICIPANTS IN SUCH A WAY THAT INSURES THEIR RIGHTS BUT ALLOWS FOR THEIR SAFETY AND THE SAFETY OF OTHERS? HOW CAN THE DISTRICT RENT TRANSPORTATION WITHOUT INSTRUCTORS HAVING TO BE INVOLVED WITH THE EXCHANGE OF MONEY? Most community college districts are able to subvert the above problems because they use vehicles owned by the district. WHY IS COLLEGE OF MARIN ONE OF THE FEW DISTRICTS WITHOUT THEIR OWN VEHICLES BUT HAS ONE OF THE MOST EXTENSIVE AND DIVERSE FIELD PROGRAMS IN THE STATE OF CALIFORNIA? A SIGNIFICANT INCONSISTANCY!
### I. Program Enrollment

<table>
<thead>
<tr>
<th></th>
<th>change from</th>
<th>to</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classes (Total)</td>
<td>Fa02</td>
<td>Sp08</td>
</tr>
</tbody>
</table>

**Why has this occurred?**
unit allotment has remained the same

**How can the positive results be maintained or the negative results be improved?**

If there are courses you wish to highlight, please describe changes and trends.

<table>
<thead>
<tr>
<th></th>
<th>change from</th>
<th>to</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTES</td>
<td>Fa03</td>
<td>Sp08</td>
</tr>
</tbody>
</table>

**Why has this occurred?**
Number of students and course offerings has remained the same.

**How can the positive results be maintained or the negative results be improved?**
Advertise for more enrollment.

If there are courses you wish to highlight, please describe changes and trends.

In the year of 2005 one of the instructors that teaches most of the courses was on sabattical and there was no replacement hired so course offering decreased. Since word of mouth is the only advertisement it is likely enrollment might decrease slightly.

<table>
<thead>
<tr>
<th></th>
<th>change from</th>
<th>to</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headcount</td>
<td>Fa02</td>
<td>Sp08</td>
</tr>
</tbody>
</table>

**Why has this occurred?**
Number of students that are aware of program/courses have remained the same. Number of course offerings have remained the same.

**How can the positive results be maintained or the negative results be improved?**
Advertising the program will likely increase enrollment.

If there are courses you wish to highlight, please describe changes and trends.

Increases have occurred in Bio 162 general ecology. Most courses have ups and downs but remain the same over 5 year period.

### II. Faculty Units

<table>
<thead>
<tr>
<th></th>
<th>change from</th>
<th>to</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTEF</td>
<td>Fa03</td>
<td>Sp08</td>
</tr>
</tbody>
</table>

**Why has this occurred?**
Enrollment and course offerings have remained constant.

**How can the positive results be maintained or the negative results be improved?**

If there are courses you wish to highlight, please describe changes and trends.

### III. Demographic Trends

### VI. Student Retention Rates

**Student Retention Rate Within The Program** (All courses combined)

<table>
<thead>
<tr>
<th></th>
<th>change from</th>
<th>to</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retention</td>
<td>Fa03</td>
<td>Sp08</td>
</tr>
</tbody>
</table>

**Why has this occurred?**
unknown

**How can the positive results be maintained or the negative results be improved?**
maintain course offerings, maintaining night and weekend course offerings

If there are courses you wish to highlight, please describe changes and trends.

VII. Student Success Rates

Student Success Rate Within The Program (All courses combined)

<table>
<thead>
<tr>
<th>Success</th>
<th>Grades of (A, B, C, CR)/(A, B, C, CR, D, F, NC, W, I)</th>
<th>change from</th>
<th>to</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fa03</td>
<td></td>
<td>Sp07</td>
</tr>
</tbody>
</table>

Why has this occurred?

More students are opting for credit/no credit rather than grades. Many students in Natural History program do not care about grades because they are life long learners and already have a degree and so are not interested in competing for a position in the work place or graduate school. This is expected to change due to more educators participating in the program.

How can the positive results be maintained or the negative results be improved?

Keep up the high quality teaching.

If there are courses you wish to highlight, please describe changes and trends.

VIII. Certificates, Degrees, and Transfer

IX. Justification

Evidence: What data or evidence supports your projected requirements?

Attachments: College of Marin Program Review Student Access and Success• AS v.2 June 2008
# Natural History/Field-2008

## I. Instructional Equipment/Materials Requirements

<table>
<thead>
<tr>
<th>Priority</th>
<th>Funded</th>
<th>#of</th>
<th>Support</th>
<th>Application</th>
<th>Instruction</th>
<th>Access</th>
<th>Outcomes</th>
<th>Assessment</th>
<th>Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Previously Funded</td>
<td>6</td>
<td>Classes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

**Expense Item:**
meals for instructor

**Shared With:**
One-time Expense:

**On-going Expenses:**

**Additional Justification for this item:**
this requirement is mandated by contract

<table>
<thead>
<tr>
<th>Priority</th>
<th>Funded</th>
<th>#of</th>
<th>Support</th>
<th>Application</th>
<th>Instruction</th>
<th>Access</th>
<th>Outcomes</th>
<th>Assessment</th>
<th>Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Previously Funded</td>
<td>6</td>
<td>Classes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Expense Item:**
expenses for travel to and from field trips for field Program

**Shared With:**
http://programreview.marin.edu/2008/IEReport2.jsp (1 of 3)
### One-time Expense:

**On-going Expenses:**

Travel is consistently needed to support field trips of Natural History/Field Program.

**Additional Justification for this item:**

<table>
<thead>
<tr>
<th>Priority</th>
<th>Funded</th>
<th># of</th>
<th>Support</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Previously Funded 2 Classes</td>
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<table>
<thead>
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<th>Tax</th>
<th>S&amp;H</th>
<th>Total Cost</th>
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<tbody>
<tr>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

**Expense Item:**

Lodging for instructor for extended field trips i.e. Alaska, Sierra Nevada

**Shared With:**

**One-time Expense:**

**On-going Expenses:**

**Additional Justification for this item:**

<table>
<thead>
<tr>
<th>Priority</th>
<th>Funded</th>
<th># of</th>
<th>Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>New Request 0 Classes</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unit Cost</th>
<th>Qty</th>
<th>Tax</th>
<th>S&amp;H</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

**Expense Item:**

See Attachments for explanation of instructor field transportation cost past and current

**Shared With:**

**One-time Expense:**
On-going Expenses:
Additional Justification for this item:

II. External Funds/Resources

<table>
<thead>
<tr>
<th>Allocation</th>
<th>Source of Funding</th>
<th>Funding Cycle</th>
<th>Funding Duration</th>
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<tbody>
<tr>
<td>III. Student Material Fees Funds</td>
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IV. Expense Justification

Evidence: What data or evidence have you provided? Please briefly describe.
See under SLO sections

Attachments: Description of attachment formats (file type, hard copy, etc.)
I. Program Faculty

<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
<th>Status:</th>
<th>Years at COM</th>
<th>Faculty Units:</th>
<th>Reassigned Units:</th>
<th>Year Retired:</th>
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</thead>
<tbody>
<tr>
<td>See under Biology</td>
<td></td>
<td></td>
<td></td>
<td>00.000</td>
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</table>

Specialty:
List all areas of specialty and/or equivalency

Leadership:

II. Instructional Support Staff

III. Teaching Unit Requirements

IV. Projected Staff Requirements

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Hours Per Week</th>
<th># of Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Tech</td>
<td>40</td>
<td>3500 Students</td>
</tr>
</tbody>
</table>

Justification:

MUSEUM TECHNICIAN <br>The museum provides a key part of our General Biology classes, as well as a large number of other biology and geology courses, especially those in the Natural History Program, together now serving at least 1000 students per year, with potential to serve many more. It provides students first-hand experience with real organisms and other specimens from the world of the present and the past, a major goal of our educational program. It is also the only public focal point facility in the sciences, which together have over 30% of the unduplicated student headcount of the College. A survey tool has been designed to measure the effectiveness of the museum learning experiences. So far, 102 students have responded. The average response was that the museum experience helped in their learning of biology. However, a majority also reported a need for updating of the museum interface. Access problems have also been recurrent. Filling of the museum lab technician position should remedy these problems and improve student satisfaction. Annual use of the survey tool can monitor this progress. Upon the retirement of the last geology technician in the 1970's, partial biology and geology museum duties were performed by biology lab technician Carolyn Ferguson. This helped maintain some activities at a reduced level. Since she retired in May, 2006, most museum work has been carried out by hourly student and non-student employees, a stopgap arrangement that was expected to last only a few months. Since 2006, the hourly workers have provided some new ideas and have maintained some essential activities, but the growing problems are now becoming obvious to all faculty, staff and students. Positive comments continue to be received, but recently students have begun to complain about interruptions in hours and missing components of their coursework when the hourly employees have not been present. They have also noted that the exhibits have not been substantially modified in 30 years. Lack of maintenance of collections and suspension of the hazardous chemical replacement program has led to growing health and safety concerns. Several lighting systems have burned out due to lack of attention; this raises the additional threat of fire hazard. Security concerns have been noted due to lack of personnel to open and close the museum. Slowdown in updating of inventory has been noticed by faculty and community members. On the other hand, the potential for revitalization is obvious. Students everywhere are now aware of new learning opportunities available at museums at our sister institutions and elsewhere. There are now many funding opportunities available that could be pursued if staff were available. The campus modernization program will require additional staff attention. Museum staff could be some of the main campus contacts for outreach and recruitment. Fortunately, COM faculty and administration have recognized the situation and taken steps to remedy it through the hiring of a new museum technician. On October 10, 2007, Division Dean Jim Arnold, Vice President Anita Martinez and Human Resources Director Linda Beam met with the department chair and agreed that a new technician should be hired. They directed the chair to develop a draft job description, which was prepared and appears below.

Recruiting should begin for this position early in Spring, 2009 to take advantage of the best pool of applicants.

V. Faculty Requirements

1. No full time instructors in the subject area.
2. Non-Availability of part-time instructors in a subject area.
3. Reduction in department Teaching Units as a result of full-time faculty retirements or other significant causes.
4. Recent or forthcoming growth as a result of additional sections of classes to enrollment demands.

5. Temporary growth in department Teaching Units as a direct result of a short-term grant or other interim resource.

6. Current or forthcoming changes that illustrate the immediate need of additional full-time faculty within this department.

7. Program Review findings.

8. Other considerations.

VI. Attachments
Evidence: What data or evidence have you provided? Please briefly describe.

Attachments: Description of attachment formats (file type, hard copy, etc.)

College of Marin Program Review Faculty Unit Allocation and Support Staff • CG v.1 February 2008
## I. Current Offices
(For the Program/Department, Faculty and Staff)

<table>
<thead>
<tr>
<th>Office</th>
<th>Use</th>
<th>Shared Office</th>
</tr>
</thead>
<tbody>
<tr>
<td>See Biol</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

## II. Preferred Instructional Rooms
(Classrooms, Labs and Instructional Spaces)

<table>
<thead>
<tr>
<th>Room</th>
<th>Type</th>
<th>Sections/Year</th>
<th>Students/Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>See Biol</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Facility has limitations:

## III. Instructional Support Spaces
(Storage, Conference Room, etc.)

<table>
<thead>
<tr>
<th>Room</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>See Biol</td>
<td></td>
</tr>
</tbody>
</table>

## IV. Justification for Projected Facility Requirements

<table>
<thead>
<tr>
<th>Primary Goal</th>
<th>Secondary Goal</th>
<th>Other Goal</th>
</tr>
</thead>
</table>

**Application:** Please indicate how the projected requirements will be applied.

Please see biology for justifications and all other Facility questions.

**Instruction:** How will instruction be improved for Student Learning and Success?

**Access:** How will access be improved for Student Learning and Success?

**Outcomes:** What Student Learning or other outcomes are expected?

**Assessment:** How will the outcomes be measured for future planning?

**Evidence:** What data or evidence supports your projected requirements?

### Attachments:
- Current Blueprint
- Room Plans
- Room Chart(s)
College Goals Report
Natural History/Field-2008

I. Institutional Excellence. The Board believes that superior results originate in high aspirations. Therefore, the Board's basic and most important goal for the College is to excel in every activity it undertakes. By so doing, it will achieve a position of local, state and perhaps even national prominence.

**Objective 1:** Please see biology for all Program Goals

**Objective 2:**

Attachments:

II. Academic Excellence. The College must offer its students rigorous, high-quality curricula including degree and certificate programs in lower division arts and sciences and in vocational and occupational fields; remedial instruction; English as a Second Language instruction; support services which help students succeed at the postsecondary level; adult noncredit education; and community services courses and programs, in keeping with state mandates. Academic excellence in all of the College's curricula and support services is at the core of the College's environment. The curricula must remain current and challenging.

**Objective 1a:**

**Objective 1b:**

Attachments:

III. Faculty and Staff Excellence. For the College to excel, it must attract and maintain a faculty and staff of the highest quality, one that functions within an environment of professional development and renewal, and one that focuses on and values the teaching and learning process.

**Objective 1a:**

**Objective 1b:**

Attachments:

IV. Community Responsiveness. The College must offer broad curricula to meet the needs of students. It must select areas of special interest and need to the communities it serves.

**Objective 1a:**

**Objective 1b:**

**Objective 1c:**

Attachments:

V. Diversity. The community college is the primary opportunity for people of great diversity to come together for growth and development. The College has an absolute obligation to bring together people of different ages, races, and ethnic backgrounds, male and female, at different levels of development, in an atmosphere of equal opportunity and tolerance.

**Objective 1a:**

**Objective 1b:**

Attachments:
Objective 1c:

Attachments:

VI. Fiscal Responsibility. The Board and the Administration must operate the College in a fiscally sound way. Together, they must limit expenditures to those that relate directly to the College’s mission, goals and objectives; maintain a prudent level of reserves; and generate new sources of revenue to supplement state funding allocations.

Objective 1c:

Attachments:

VII. Develop and implement sound and coordinated planning processes. Develop and implement sound and coordinated planning processes, utilizing data gathered through Program Review, and other data sources, to support institutional, instructional, and student support service goals, and to promote achievement of student learning outcomes.

Objective 1a:

Objective 1b:

Objective 1c:

Attachments:

VIII. Create a physical environment that is inviting to students, generates pride in the community, adheres to green principles, and supports the College’s Mission, Goals and Initiatives.

Objective 1c:

Attachments:
Concluding Remarks
Natural History/Field-2008

I. Program Excellence (Best Practices)
Briefly summarize examples staff/faculty, institutional, and academic excellence.

1. Approach to Teaching Science
Our students do rather than read about science. Our students succeed because we have high standards and do everything we can to help students attain them. In addition, we believe that the only way to truly understand science is through an interdisciplinary approach. We collaborate with professors and community members both within and outside of our department.

2. Community Involvement
All of our faculty members are active members of our community. Our participation includes the following types of organizations: high schools, colleges and universities, non-profit community organizations, and state and federal parks to name a few.

3. Natural History/Field Program
Our Natural History Certificate/field program is unique, popular, and extremely successful. Our students truly understand the basic tenants which govern the natural world. Many are retired life long learners that are working on a second career and using their Natural History Certificate to teach sustainability and other environmentally important concepts to K-12 student throughout the Bay Area.

5. Faculty Research
All of our full time faculty members are conducting research in their area of specialty. Our preparation/laboratory spaces are invaluable in allowing us to investigate the natural world and to involve and share this knowledge with interested students.

6. Facilities
Our green house, Bolinas marine laboratory, soils laboratory and museum are great assets to our students and to our community. Their attributes are detailed in other sections of this document.

7. Job Training
Students who choose offered vocations are ready to start working as docents, biotechnology technicians, or environmental science technicians when they graduate from College of Marin.

8. Interdisciplinary Approach to Curriculum and Resources
Biology, the study of life, is inextricably interconnected with sister fields such as chemistry and physics, as well as with the environment in which life is found. Our curriculum reflects this intertwining by having intimate connections with other disciplines such as Geology, Geography, and Environmental Landscaping - offering classes that cross disciplines in our department and in other departments. Our resource use also reflects this connection, with overlaps ranging from field gear to the greenhouse and museum. As we continue to develop curriculum, in particular relating to Environmental Science, Sustainability, and Restoration, it will become more and more vital that we sustain and nurture these connections.

9. Attitude
All members of our department are respectful and considerate of each other and of our students. It is a pleasure for us to come to work and, judging from their reactions, a pleasure for students to take classes in our department.

II. Program Resources (Responsiveness)
Briefly summarize examples of key resources required for your program to meet or exceed the college goals (as cited in this review).

1. Faculty Preparation and Laboratory Space
We need this space to work out new experiments and to maintain our research program for majors. Many of our field courses are instrument/tool intensive and preparatory rooms provided allow us to organize our tools/study skins/specimens and other field project materials.

2. Vans
Our department needs vans to transport students on field trips. We are the only community college with a Natural History Program and that runs field trips that continuously rents vans. Having College of Marin Biology/Geology Department transportaion would make our trips safer, significantly more convenient for instructors, administrative assistants and administrators and much less expensive for students taking our courses. This would allow faculty who must teach and organize, field trips to spend more time teaching and less time on transportation logistics.

3. Student Study Area
Our students are often on campus late into the night because we offer classes in the evening to accommodate students that work or have other obligations during the day. They need a place where they can study and get something to eat.

4. Counselor
Our students need a counselor dedicated to science and math students. As counselors are not trained in the sciences, many of our counselors find this (understandably) daunting.
5. Funds
We need equipment, equipment maintenance, supply, and field trip transportation funds we can count on. Without a known budget it is impossible for us to plan and offer a coherent curriculum.

III. Moving Forward Objectives (Planning)
Briefly summarize examples of data-driven and coordinated planning to improve student enrollment, learning and success.

1. Approach
Keep doing what we do best and what sets us apart from other departments and institutions (see I above).

2. Curriculum
Expand our offerings to keep our department curriculum broad, current, and meaningful; and so that students can move through our curriculum as a cohort.

3. Field Program
Expand our field course offerings and include a field component in as many of our courses as possible.

4. Courses
Design and implement a Microbial Ecology Course and expand the soil component of many other classes. Our faculty agrees that the study of soils is critical to maintaining our success as a department.

5. Wildlife conservation is a popular and increasingly important career choice so it would be prudent to develop a wildlife conservation course.

6. Attitude
Keep meeting regularly as a faculty preferably over food, coffee. Completing this program review reinforced our dedication to our students, to the department and to each other.

IV. Other Concluding Remarks
Briefly summarize any additional insight needed to conclude this program review.

We expect this Program Review to result in a better understanding of our curriculum both within and outside of our department and among administrators, and to be used to provide us the resources we require to maintain our extremely successful programs.