



Elkhorn Slough National Estuarine Research Reserve
COASTAL TRAINING PROGRAM
WEB SURVEY

Spring 2005



Produced by:
Applied Survey Research
P.O. Box 1927
Watsonville, CA 95077
831-728-1356
www.appliedsurveyresearch.org
Contact: Kelly Pleskunas

Table of Contents

Acknowledgements _____	2
Project Background _____	3
Methodology _____	4
Preferred Workshop Scheduling and Format _____	5
Workshop Fees _____	12
Sources of Environmental Information _____	13
Barriers to Workshop Attendance _____	14
Training Subject Matter _____	16
Knowledge Base _____	19
Identifying, Naming and Mapping Species and Communities _____	22
Sensitive Plants _____	24
Post-Coastal Training Program Workshop Activities _____	29
Respondent Demographics _____	30
Appendix 1: Overall Survey Results _____	33
Appendix 2: Selected Cross-tabulation Results _____	56

Acknowledgements

Applied Survey Research (ASR) prepared this survey and report under award NA04NOS4200074 from the National Oceanic and Atmospheric Administration (NOAA) and the U.S. Department of Commerce (DOC). The statements, findings, conclusions, and recommendations are those of the authors and do not necessarily reflect the views of the NOAA or the DOC.

Applied Survey Research wishes to thank the survey participants for their valuable time and feedback.

Project Background

The National Estuarine Research Reserve System has adopted guidelines requiring individual Reserves' Coastal Training Programs to conduct periodic audience needs assessments. The Coastal Training Program of the Elkhorn Slough National Estuarine Research Reserve (ESNERR) has previously been targeting coastal government planning and regulatory agency personnel; more recently, biological consultants have been a significantly increasing audience. Because of biological consultants' increasing interest in the Reserve and the important role they play in protecting natural resources in California, ESNERR felt it was necessary to better understand these consultants' educational needs. A review of prior studies revealed that similar efforts to better understand the needs of this group have not previously been undertaken. The aim of the project is for biological consultants working on California's Central Coast: 1) to formulate appropriate educational program content; 2) to better target the delivery of those programs; 3) to understand significant barriers of application of the educational content, and; 4) to create the educational format desired.

Previous needs assessments performed by the Coastal Training Program, locally and nationally, have helped it to better design their educational programs as evidenced by post-program evaluations. This 2005 web survey maintains ESNERR's tradition of continuously improving their educational programs.

To achieve these goals, ESNERR contracted with Applied Survey Research (ASR), a local non-profit social research firm with over 25 years of experience, to assist with the design, implementation, and analysis of the Elkhorn Slough Coastal Training Program web survey.

Methodology

Applied Survey Research and ESNERR partnered to design a web-based survey that served as the primary method of data collection. Some questions were similar to those asked of planning and enforcement groups in 2003, allowing for some comparisons between years. Once the survey had been finalized, ESNERR submitted a Request for IRB Review to the Applied Survey Research Institutional Review Board (IRB). The IRB determined that the survey and research met national human subject protection requirements and granted approval for the study.

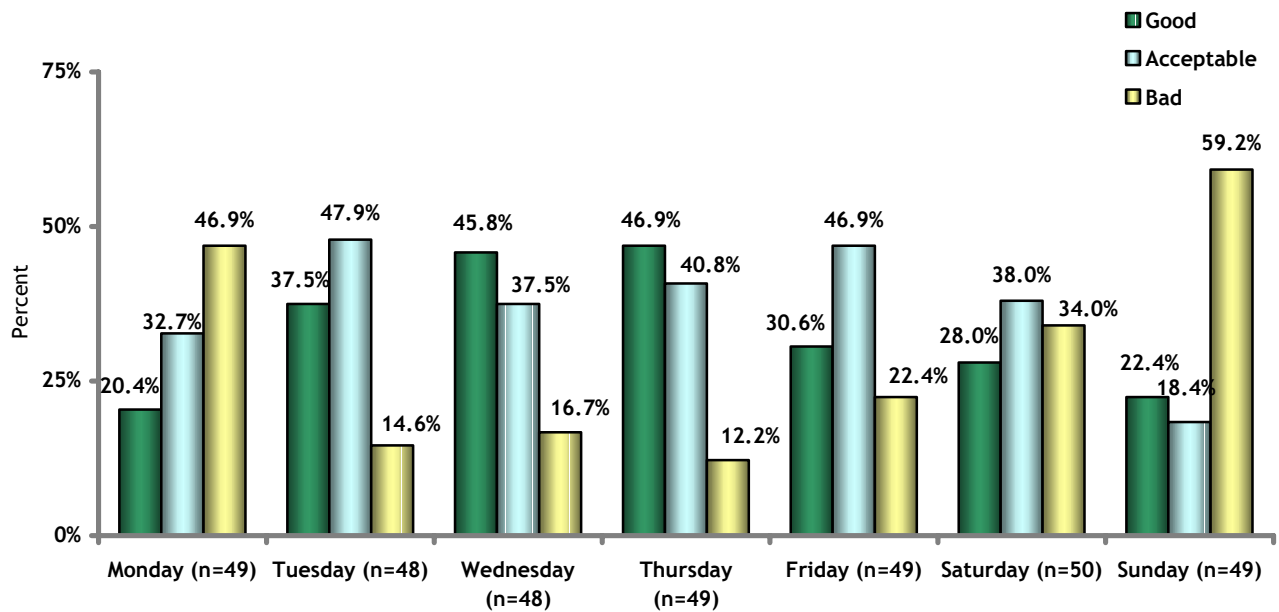
Possible survey respondents were gathered from a database maintained by ESNERR. This database contained the contact information for 125 biological consultants, many of whom had previously attended a workshop at the Elkhorn Slough Foundation. Potential respondents were consultants in the database for whom an email address was known. These consultants were emailed a letter explaining the purpose of the survey and provided with the web address for the survey. The confidential survey took approximately 15 minutes, and respondents could stop and continue at a later date until the survey collection was complete. A total of 51 consultants completed the survey for a response rate of 41%.

ASR then analyzed the data from the survey using SPSS software. Where applicable, cross-tabulations were run to compare specific groups of respondents. The findings from the survey are presented in this report. Where possible, findings from 2005 are compared with those from the 2003 assessment. The 2003 assessment also used a web-based surveying method, though the targeted audience differed as the 2003 survey was targeted to planning and enforcement agencies. In 2003, 40 of the possible 91 people completed the survey for a response rate of 44%.

Preferred Workshop Scheduling and Format

When asked to rate their preference of days for training workshops, respondents seemed to favor mid-week; high percentages of respondents rated Tuesday, Wednesday and Thursday as “good” or “acceptable.” Comparatively, high percentages of respondents rated Monday and Sunday as “bad.” When asked to rate the times of year they prefer to attend training workshops, respondents indicated fall and winter months preferable to spring and summer months. Sixty-nine percent of respondents rated January as “good” while 60% of respondents rated February as “good.” Comparatively, 30% of respondents rated May and June as “good.”

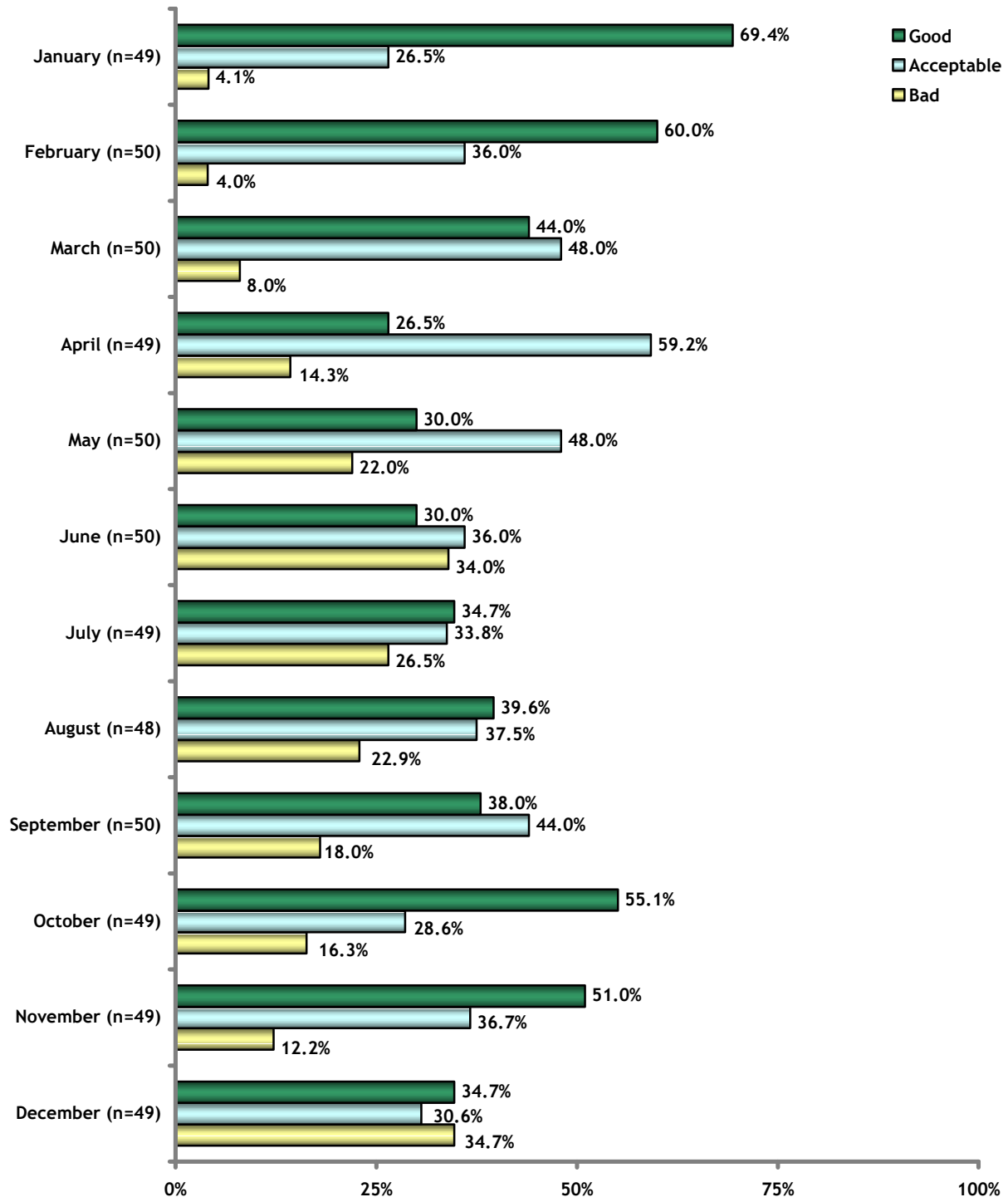
PLEASE RATE YOUR PREFERENCE OF DAYS FOR TRAINING WORKSHOPS:



Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

Elkhorn Slough National Estuarine Research Reserve
COASTAL TRAINING PROGRAM WEB SURVEY

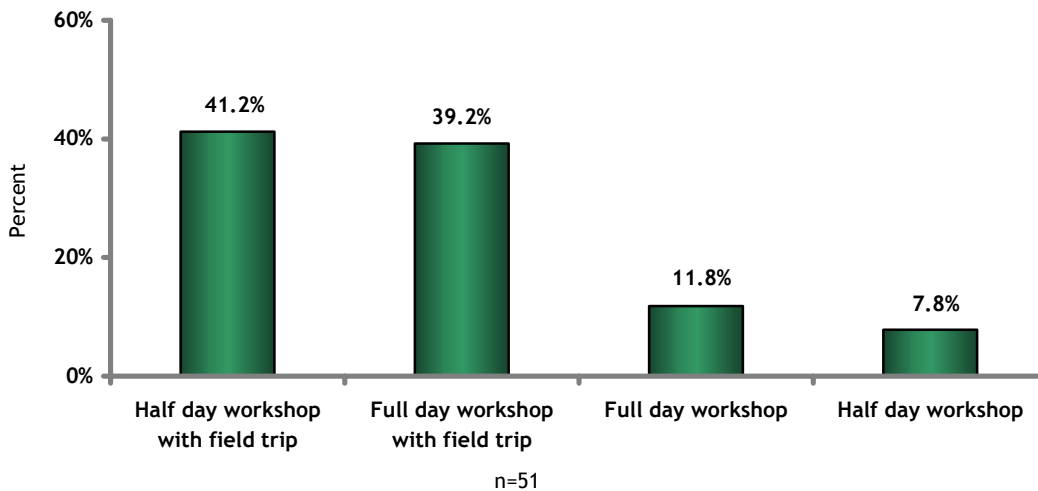
PLEASE RATE THE FOLLOWING TIMES OF YEAR FOR YOU TO ATTEND TRAINING WORKSHOPS:



Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

Respondents seemed equally in favor of “half-day workshops with field trip” as “full-day workshops with field trip” with 41% of respondents indicating they preferred “half-day workshops with field trip” and 39% indicating they preferred “full-day workshops with field trip.” Far fewer respondents preferred “full day workshops” or “half-day workshops” (12% and 8%, respectively).

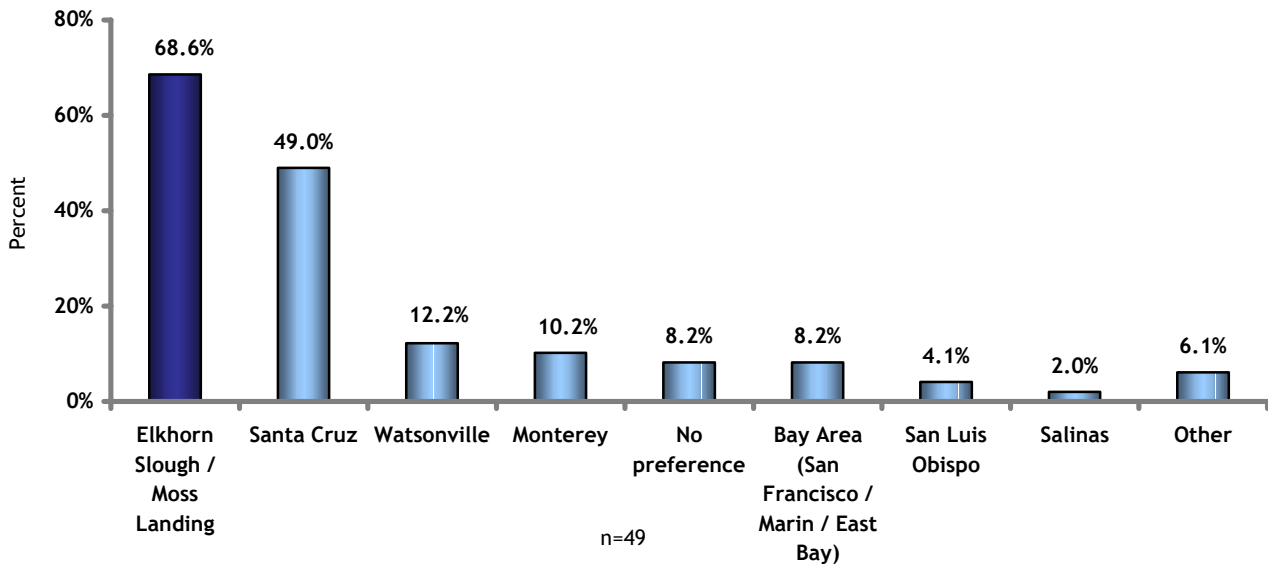
WHICH OF THE FOLLOWING WORKSHOP SCHEDULES DO YOU PREFER?



Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

When asked if the Elkhorn Slough / Moss Landing area was a convenient location to attend a half-day or day-long workshop, 69% of respondents said it was and 28% said it was sometimes convenient. Further, “Santa Cruz” was the area respondents next preferred to attend training workshops (49%) followed by Watsonville (12%) and Monterey (10%). Eight percent of respondents had “no preference.”

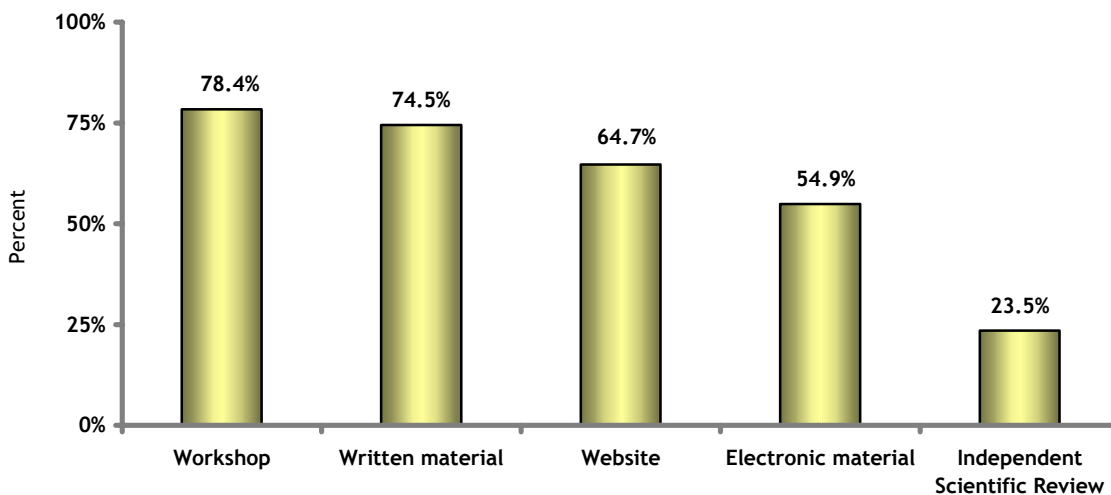
WHERE WOULD YOU PREFER TO ATTEND TRAINING WORKSHOPS?



Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

Web survey respondents seemed to feel many educational formats were preferable except for “independent scientific review” when permitted to choose from several different types of formats. Seventy-eight percent of respondents preferred “workshops,” 75% “written material,” 65% preferred “website” and 55% preferred “electronic material.” Only 24% of respondents chose “independent scientific review” as their preferred educational format.

WHICH OF THE FOLLOWING EDUCATIONAL FORMATS DO YOU PREFER?

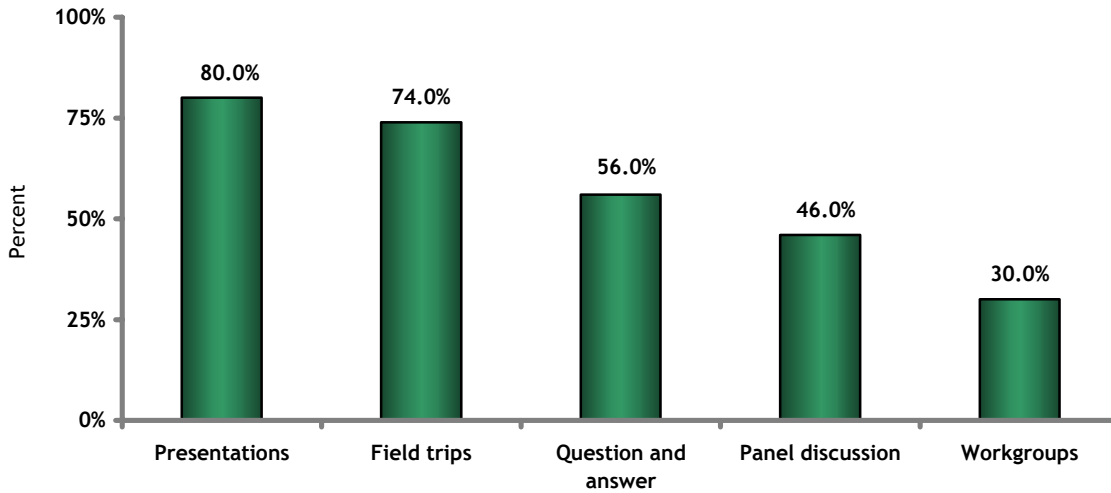


Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

Note: Multiple response question with 51 respondents providing 151 responses.

When asked about workshop structures, respondents seemed to prefer learning from others over more interactive workshop structures. Eighty percent of respondents preferred “presentations” while 74% preferred “field trips.” Smaller percentages of respondents preferred “question and answer” structures (56%), “panel discussions” (46%) or “workgroups” (30%).

WHICH OF THE FOLLOWING WORKSHOP STRUCTURES DO YOU PREFER?



Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

Note: Multiple response question with 50 respondents providing 143 responses.

Elkhorn Slough National Estuarine Research Reserve
COASTAL TRAINING PROGRAM WEB SURVEY

Most respondents indicated they felt most materials would be “very useful” or “somewhat useful” as part of a training workshop. However, high percentages of respondents felt VHS video of the workshop (65%), web-streamed video of the workshop (54%), and DVD of the workshop (42%) would be “not at all useful.”

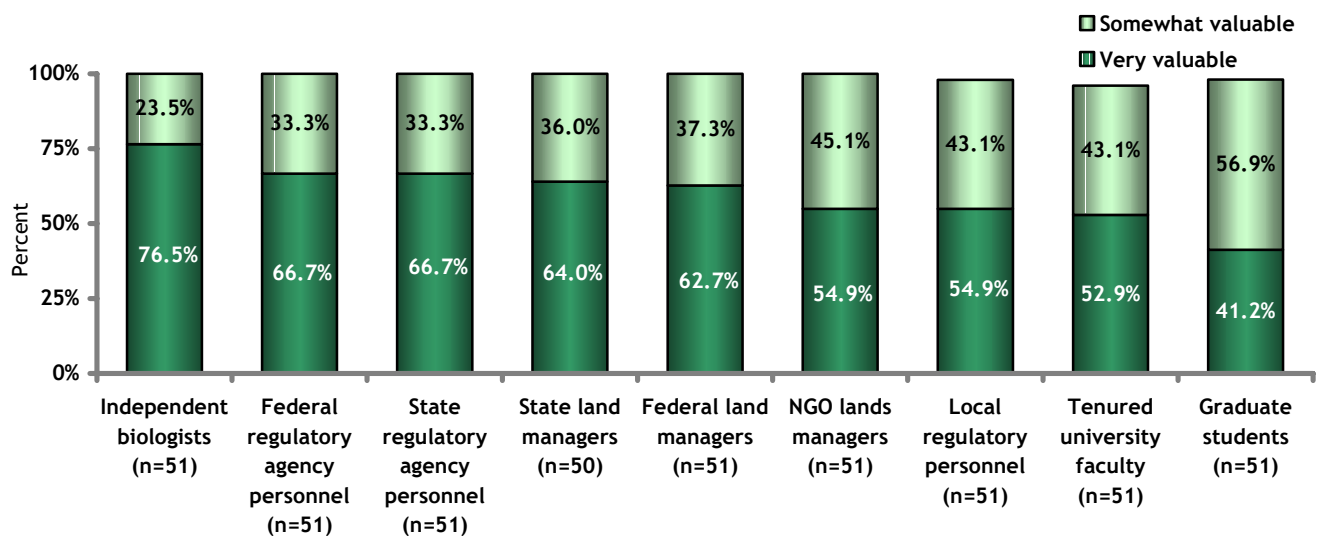
WHICH OF THE FOLLOWING MATERIALS WOULD YOU FIND USEFUL AS PART OF A TRAINING WORKSHOP?

RESPONSE	VERY USEFUL	SOMEWHAT USEFUL	NOT AT ALL USEFUL	n
Copies of peer-reviewed published papers on the workshop issue	86.0%	12.0%	2.0%	50
A summary bibliography on the workshop issue	70.6%	27.5%	2.0%	51
Written abstracts of presentations	66.7%	31.4%	2.0%	51
Contact information for the attendees	62.7%	37.3%	0.0%	51
CD of slides/PowerPoint presentations	44.0%	44.0%	12.0%	50
Printouts of slides/PowerPoint presentations	39.2%	58.8%	2.0%	51
Web-streamed video of the workshop	14.0%	32.0%	54.0%	50
DVD (video) of the workshop	10.4%	47.9%	41.7%	48
VHS video of the workshop	2.0%	32.7%	65.3%	49

Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

High percentages of respondents indicated that independent biologists (77%), federal regulatory agency personnel (67%), state regulatory agency personnel (67%), state land managers (64%), and federal land managers (63%) would be “very valuable” as workshop presenters. Forty-one percent of respondents felt that graduate students would be “very valuable” presenters.

HOW VALUABLE ARE THE FOLLOWING GROUPS AS POTENTIAL WORKSHOP PRESENTERS?



Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

Ninety-two percent of respondents felt it was important to have time to network during workshops while 8% did not. When asked who, specifically, it would be important to interact with during workshops featuring ecological / resource conservation information, 73% of respondents said regulatory agency personnel would be “very valuable” to interact with while 66% said people in similar positions to themselves at other agencies would be “very valuable” to interact with. Thirty-one percent of respondents indicated fishermen or groups representing fishermen would be “not at all valuable” to interact with.

WITH WHAT OTHER GROUPS WOULD IT BE IMPORTANT FOR YOU TO INTERACT DURING WORKSHOPS FEATURING ECOLOGICAL/RESOURCE CONSERVATION INFORMATION?

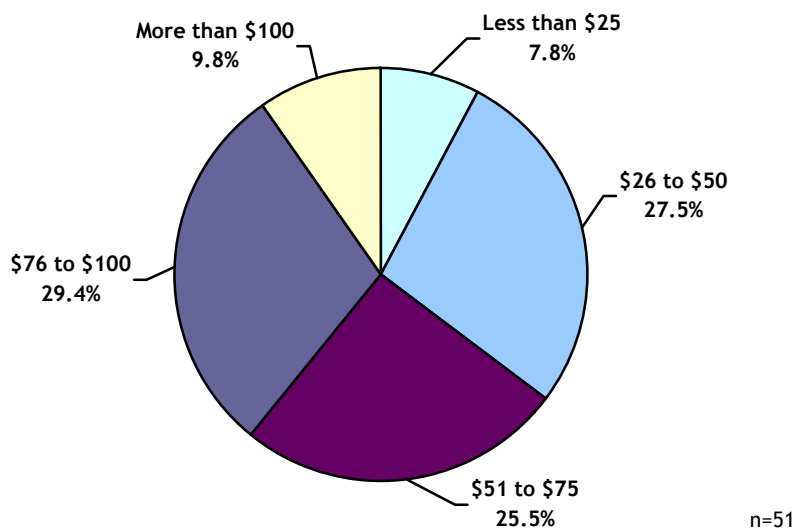
RESPONSE	VERY VALUABLE	SOMEWHAT VALUABLE	NOT AT ALL VALUABLE	n
Regulatory agency personnel	72.5%	27.5%	0.0%	51
People in similar positions to yourself at other agencies	66.0%	34.0%	0.0%	50
Farmers (or groups representing them)	43.1%	45.1%	11.8%	51
Non-governmental environmental organizations	36.0%	62.0%	2.0%	50
Farm advisors with state or federal agencies	35.3%	45.1%	19.6%	51
Fishermen (or groups representing them)	27.5%	41.2%	31.4%	51
Business owners (or groups representing them)	27.1%	54.2%	18.8%	48
People within your agency	22.2%	66.7%	11.1%	45
Politicians and their staff	19.6%	56.9%	23.5%	51

Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

Workshop Fees

Web survey respondents were equally divided when asked about much they would be willing to pay for a one-day workshop. Twenty-eight percent of respondents said they would pay “\$26 to \$50”, 29% were willing to pay “\$76 to \$100” for a one-day workshop and 26% said they would pay \$51 to \$75.” Only 10% of respondents indicated they were willing to pay “more than \$100” for a one-day workshop.

IF IT WERE NECESSARY TO CHARGE A FEE, HOW MUCH WOULD YOU BE WILLING TO PAY FOR A ONE-DAY WORKSHOP?



Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

Sources of Environmental Information

When asked how useful specific sources of information were in learning about environmental issues, high percentages of respondents said scientific or professional conferences (80%), workshops (78%), the web (75%), and colleagues at work (72%) were “very useful.” Comparatively, 52% of respondents indicated television and 43% indicated radio were “not at all useful” as sources for learning about environmental issues.

HOW USEFUL ARE THE FOLLOWING SOURCES OF INFORMATION IN LEARNING ABOUT ENVIRONMENTAL ISSUES?

RESPONSE	VERY USEFUL	SOMEWHAT USEFUL	NOT AT ALL USEFUL	n
Scientific/Professional conferences	80.4%	19.6%	0.0%	51
Workshops	78.0%	20.0%	2.0%	50
Web	74.5%	23.5%	2.0%	51
Colleagues at work	72.0%	24.0%	4.0%	50
Peer-reviewed papers	66.0%	34.0%	0.0%	50
Books	58.0%	38.0%	4.0%	50
Regulatory agency biologists	51.0%	47.1%	2.0%	51
California Natural Diversity Database	49.0%	44.9%	6.1%	49
Environmental review documents	48.0%	50.0%	2.0%	50
University researchers	43.1%	52.9%	3.9%	51
Continuing education classes	40.0%	52.0%	8.0%	50
Unpublished reports	39.2%	56.9%	3.9%	51
Colleagues at other companies	38.0%	56.0%	6.0%	50
Government publications	32.0%	62.0%	6.0%	50
Planning conferences	25.5%	66.7%	7.8%	51
NGO publications or events	24.5%	67.3%	8.2%	49
Museums/natural area visitor centers	18.0%	60.0%	22.0%	50
Brochures/Fliers	16.0%	66.0%	18.0%	50
Radio	7.8%	49.0%	43.1%	51
Television	4.0%	44.0%	52.0%	50

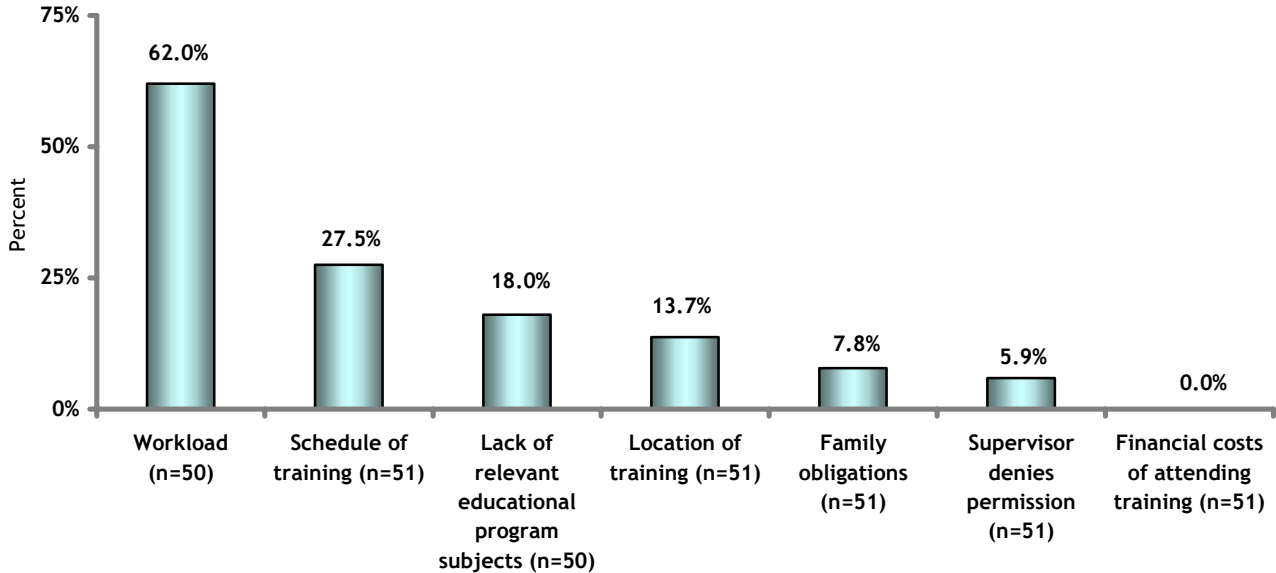
Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

Barriers to Workshop Attendance

Web survey respondents were asked about perceived barriers to attending workshops. The number one barrier to workshop attendance for survey respondents is their workload (62%) followed by schedule of training (28%) and lack of relevant educational program subjects (18%). Interestingly, no respondents said financial costs of attending trainings was a “major problem.”

Respondents were also asked how frequently specific issues inhibited their attendance at training workshops. Eight percent said that their budget did not allow for extra scientific research and inhibited them from attending training workshops “all of the time” while 41% said this “frequently” inhibited them from attending workshops. Other issues with high percentages of respondents indicating they were inhibited from attending workshops “all of the time” or “frequently” were the budget not allowing for extra field time (35%), the laws not supporting implementation of latest science (31%), and lack of understanding by clients (30%). Interestingly, 35% of respondents said lack of societal support for environmental issues “infrequently” inhibited their attendance at training workshops while 18% said this “never” inhibited their attendance.

RESPONDENTS INDICATED THE FOLLOWING ARE A “MAJOR PROBLEM” TO THEIR ATTENDANCE AT TRAINING WORKSHOPS



Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

Elkhorn Slough National Estuarine Research Reserve
COASTAL TRAINING PROGRAM WEB SURVEY

HOW OFTEN DID THE FOLLOWING KEEP YOU FROM IMPLEMENTING THE BEST AVAILABLE SCIENCE IN THE WORK YOU DO?

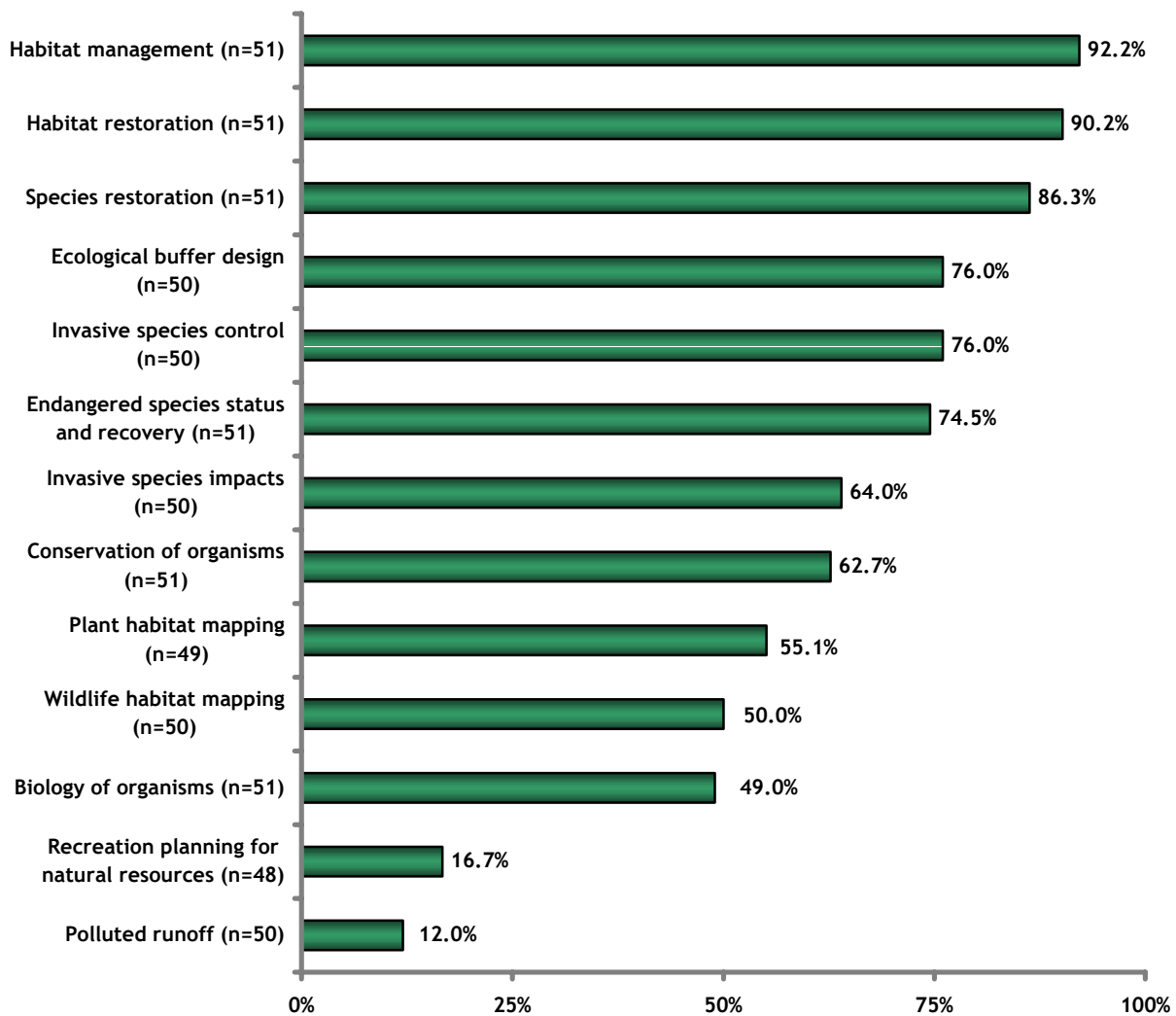
RESPONSE	ALL OF THE TIME	FREQUENTLY	SOME OF THE TIME	IN-FREQUENTLY	NEVER	n
Budget did not allow for extra scientific research	7.8%	41.2%	37.3%	9.8%	3.9%	51
Budget did not allow for extra field time	2.0%	33.3%	47.1%	15.7%	2.0%	51
The laws do not support implementation of latest science	3.9%	27.5%	27.5%	35.3%	5.9%	51
Lack of understanding by clients	4.0%	26.0%	42.0%	22.0%	6.0%	50
Budget did not allow for sufficient analysis time	0.0%	23.5%	54.9%	17.6%	3.9%	51
Lack of understanding by regulators overseeing project	2.0%	21.6%	43.1%	27.5%	5.9%	51
Lack of understanding by senior colleagues	0.0%	9.8%	19.6%	45.1%	25.5%	51
Information and conclusions presented were not clear enough to implement	0.0%	9.8%	33.3%	43.1%	13.7%	51
Lack of societal support for environmental regulation	0.0%	7.8%	39.2%	35.3%	17.6%	51

Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

Training Subject Matter

Almost all respondents rated habitat management (92%) and habitat restoration (90%) as subjects in which they would be “very interested” in receiving training. Eighty-six percent of respondents said they would be “very interested” in learning about species restoration while about three-fourths would be “very interested” in ecological buffer design, invasive species control, and endangered species status and recovery. Only 12% of respondents said they would be “very interested” in receiving training in polluted runoff.

PLEASE RATE YOUR INTEREST IN RECEIVING TRAINING IN THE FOLLOWING SUBJECTS: RESPONDENTS INDICATING THEY WERE “VERY INTERESTED”



Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

Next, respondents were asked about their level of interest in specific subject areas. When queried about population status and recovery methods for endangered species, 80% of respondents indicated they would be interested in learning about the California Tiger Salamander while another 60% reported interest in the Steelhead trout. High percentages of respondents indicated they would be interested in learning about methods for the conservation of local habitats for Freshwater wetlands and Riparian systems (88% and 86%, respectively). In terms of the life history of invasive species and their ecological impacts, 79% of respondents reported interest in non-native annual grasses and 60% reported interest in learning about Pampass Grass, Poison Hemlock, and French Broom. Respondents also indicated high interest in learning about how to control the same species.

PLEASE INDICATE WHICH OF THE FOLLOWING SPECIFIC SUBJECT AREAS YOU WOULD BE INTERESTED IN:

POPULATION STATUS AND RECOVERY METHODS FOR ENDANGERED SPECIES.

RESPONSE	FREQUENCY	PERCENT
California tiger salamander	40	80.0%
Steelhead trout	30	60.0%
Chorizanthe robusta robusta	26	52.0%
Gilia tenuiflora arenaria	21	42.0%
Arctostaphylos pajaroensis	21	42.0%
Other	16	32.0%

Multiple response question with 50 respondents offering 154 responses.

METHODS FOR THE CONSERVATION OF LOCAL HABITATS.

RESPONSE	FREQUENCY	PERCENT
Freshwater wetlands	45	88.2%
Riparian systems	44	86.3%
Coast live oak woodlands	42	82.4%
Estuaries/Tidal wetlands	36	70.6%
Mixed woodlands (bay, tanoak, Douglas fir, etc)	34	66.7%
Coastal prairie	34	66.7%
Coastal dunes	33	64.7%
Maritime chaparral	31	60.8%
Redwood forests	26	51.0%

Multiple response question with 51 respondents offering 325 responses.

INVASIVE SPECIES ECOLOGICAL IMPACTS AND LIFE HISTORY OF:

RESPONSE	FREQUENCY	PERCENT
Non-native annual grasses	38	79.2%
Pampass grass	29	60.4%
Poison hemlock	29	60.4%
French broom	29	60.4%
Ice plant	22	45.8%
Veldt grass	22	45.8%
Acacia	20	41.7%
Other	15	31.3%

Multiple response question with 48 respondents offering 204 responses.

INVASIVE SPECIES CONTROL OF:

RESPONSE	FREQUENCY	PERCENT
Non-native annual grasses	40	81.6%
Poison hemlock	32	65.3%
Pampass grass	31	63.3%
French broom	31	63.3%
Veldt grass	27	55.1%
Ice plant	24	49.0%
Acacia	23	46.9%
Other	17	34.7%

Multiple response question with 49 respondents offering 225 responses.

Respondents were asked what other Coastal Training Program services they would be likely to utilize. Seventy-two percent said they would also be likely to utilize independent scientific review of scientific questions they might have while 55% said they might use continuing education credit or other recognition systems for workshops.

WHICH OF THESE OTHER COASTAL TRAINING PROGRAM SERVICES WOULD YOU BE LIKELY TO UTILIZE?

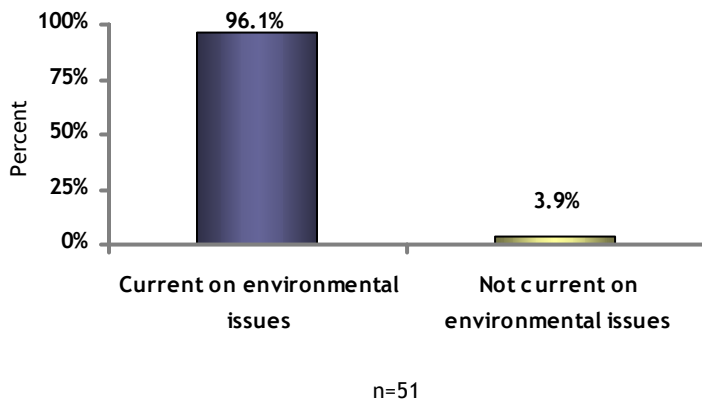
RESPONSE	FREQUENCY	PERCENT
Independent scientific review of a scientific question you may have	34	72.3%
Continuing education credit for workshops or other recognition systems	26	55.3%
Independent scientific review of controversial or high-impact projects	20	42.6%
Independent scientific review of a document you produce	17	36.2%

Multiple response question with 47 respondents offering 97 responses.

Knowledge Base

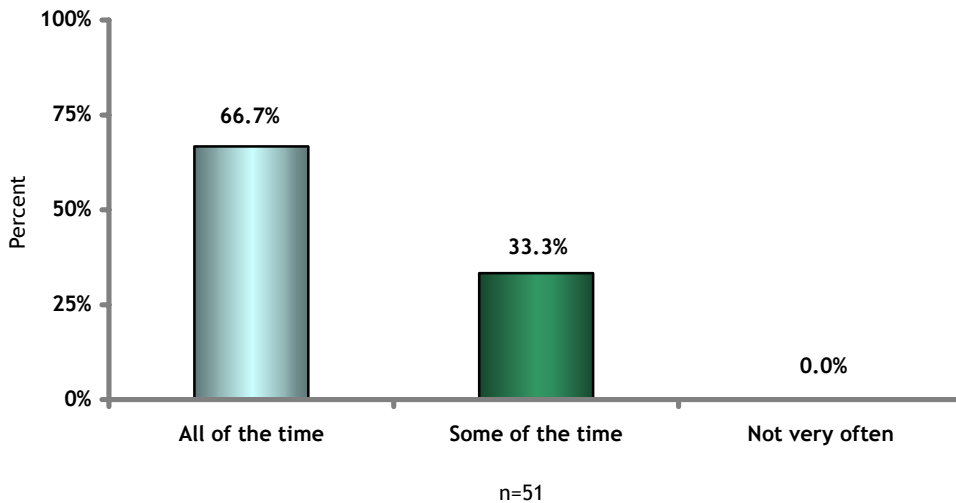
As consultants, survey respondents must be knowledgeable about their field. Therefore, survey respondents were asked a series of questions about their knowledge base. Almost all (96%) of web survey respondents consider themselves current on environmental issues relative to their work. Further, 67% feel they have enough background training to perform the biological consulting duties they are assigned “all of the time” and 33% feel they have adequate background training “some of the time.”

RESPONDENTS WHO CONSIDER THEMSELVES CURRENT ON ENVIRONMENTAL ISSUES RELATIVE TO THEIR WORK



Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

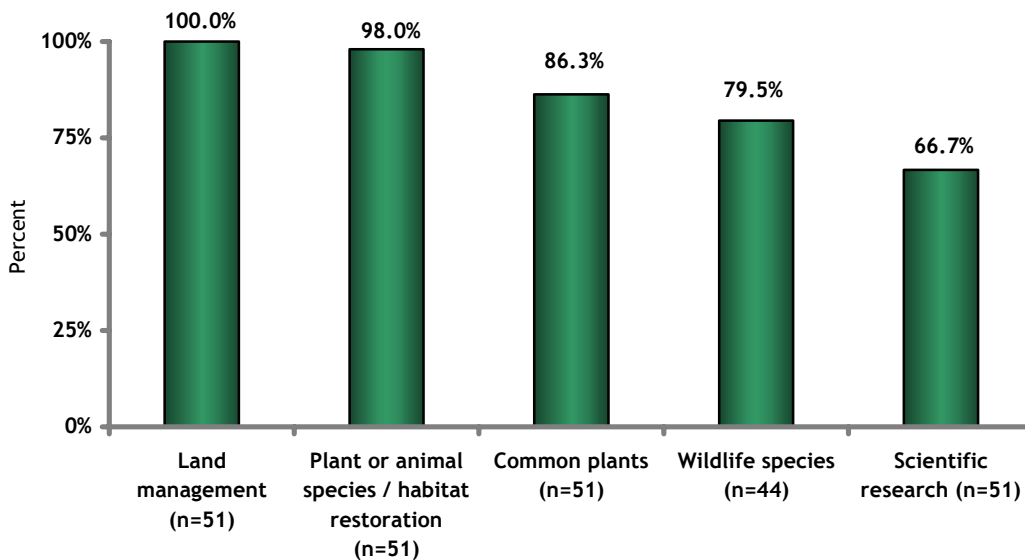
RESPONDENTS WHO FEEL THEY HAVE ENOUGH BACKGROUND TRAINING TO PERFORM THE BIOLOGICAL CONSULTING DUTIES THEY ARE ASSIGNED:



Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

Many respondents indicated their job requires them to consult on issues. All respondents (100%) must consult on land management issues while 98% consult on plant or animal species or habitat restoration. While 80% of respondents reported that their job requires them to consult on wildlife species, over half (54%) consider themselves “very knowledgeable” about wildlife species and 40% consider themselves “somewhat knowledgeable.”

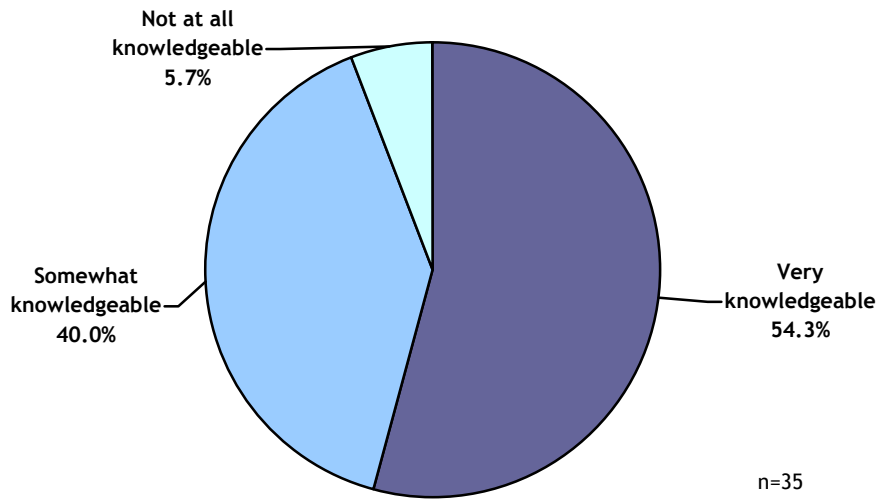
DOES YOUR JOB REQUIRE YOU TO CONSULT ON:



Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

Elkhorn Slough National Estuarine Research Reserve
COASTAL TRAINING PROGRAM WEB SURVEY

HOW KNOWLEDGEABLE ARE YOU ABOUT WILDLIFE SPECIES?



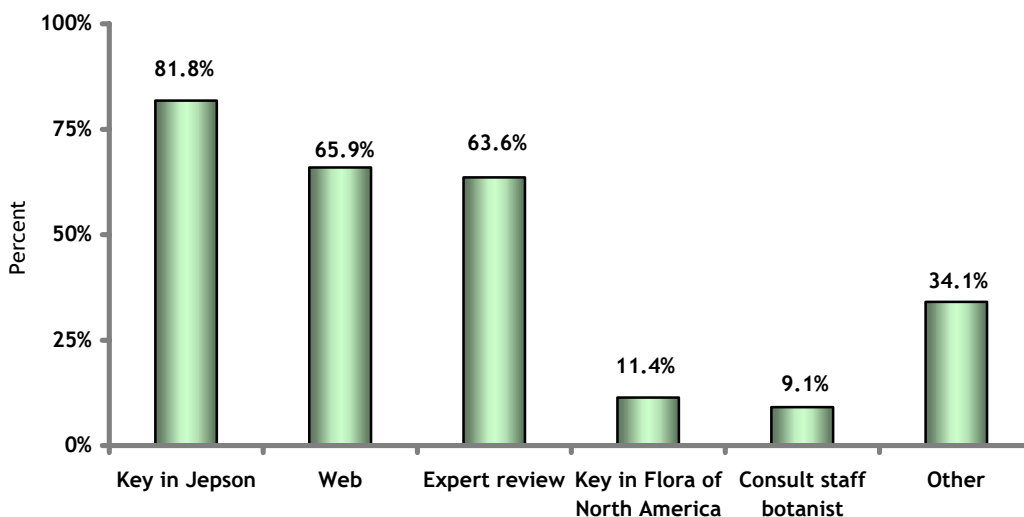
Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

Identifying, Naming and Mapping Species and Communities

Respondents were asked questions about identifying common plants they did not know, about labeling plant communities, and about mapping techniques. The greatest percentage of respondents (82%) reported using the “Key in Jepson” to identify common plants they did not know followed by using the “web” (66%) and “expert review” (64%). “Sawyer and Keeler-Wolf” was the naming methodology used to label plant communities by 80% of survey respondents followed by 71% using “Holland.” Finally, when asked what survey methodology respondents most commonly used to map vegetation or plant communities, about one-third said they use “aerial photos to map patterns surveyed on the ground” (37%) and another third said they were “familiar with the composition of plant communities and map what they see on the ground” (33%).

IDENTIFYING UNKNOWN PLANTS

HOW DO YOU IDENTIFY THE COMMON PLANTS YOU DON'T KNOW?

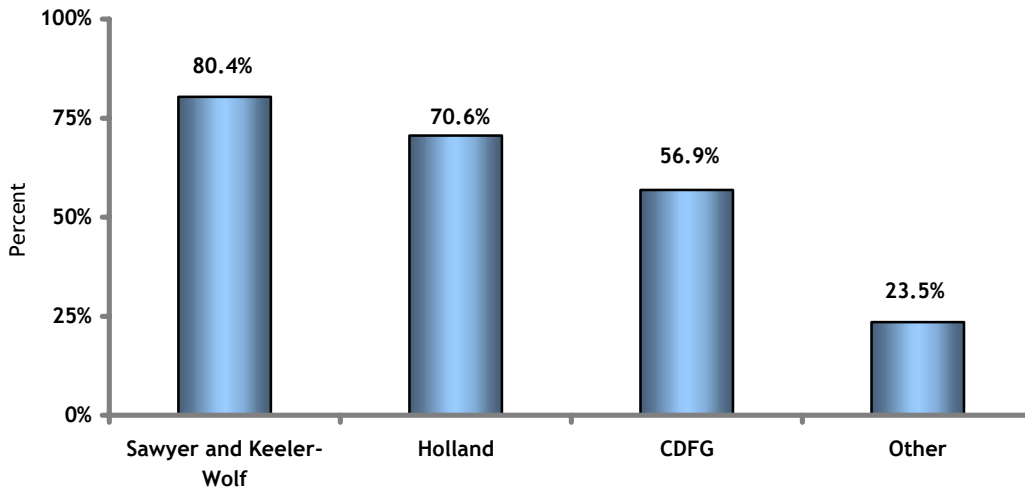


Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

Note: Multiple response question with 44 respondents providing 117 responses.

LABELING PLANT COMMUNITIES

WHICH OF THE FOLLOWING NAMING METHODOLOGIES DO YOU USE TO LABEL PLANT COMMUNITIES?

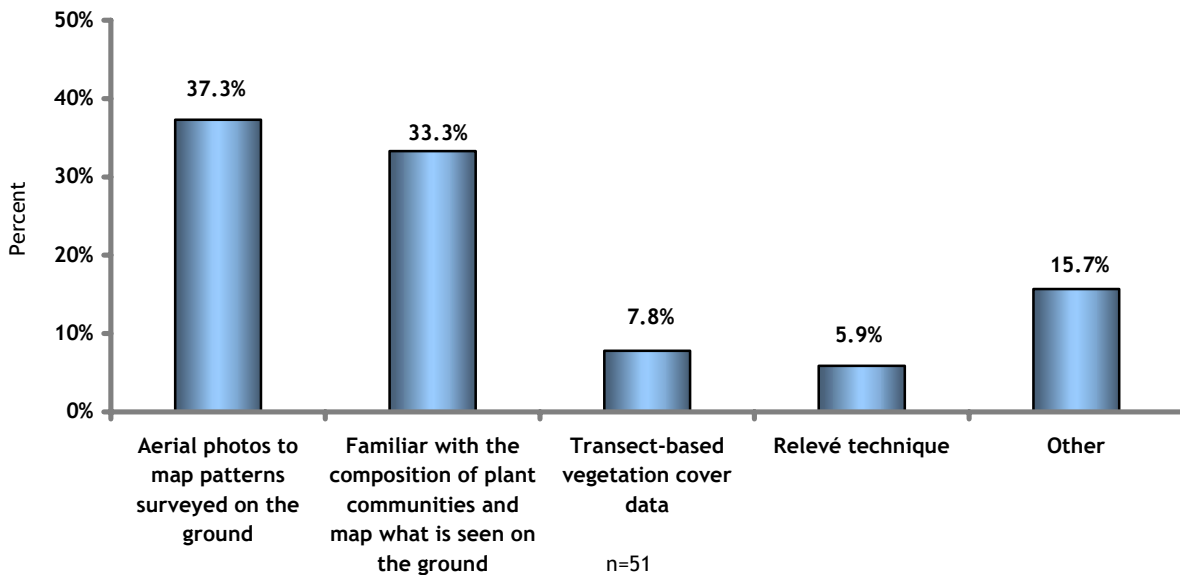


Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

Note: Multiple response question with 51 respondents providing 118 responses.

MAPPING VEGETATION / PLANT COMMUNITIES

WHAT SURVEY METHODOLOGY DO YOU MOST COMMONLY USE TO MAP VEGETATION / PLANT COMMUNITIES?



Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

Sensitive Plants

Respondents were also asked a series of questions about sensitive plants. When asked what percentage of their job is focused on sensitive plants, the greatest percentage of respondents said “1-15%” (24%) and “31-50%” (24%). Eighteen percent of respondents indicated they spend “51-75%” of their time focused on sensitive plants followed by “16-30%” (14%), “76-100%” (12%), and “none” (8%). Twenty-one percent of respondents reported being able to comfortably identify “11 to 20” CEQA-covered plants in the field and the same percentage said they could comfortably identify “21 to 50” sensitive plants. Only three respondents (9%) said they were comfortable identifying “51 to 100” plants or “over 100” sensitive plants. For identifying plants they did not know, the greatest percentage of respondents reported using the “Key in Jepson” (79%) and “expert review” (79%).

APPROXIMATELY HOW MANY SENSITIVE PLANTS (COVERED BY CEQA) CAN YOU COMFORTABLY IDENTIFY IN THE FIELD?

RESPONSE	FREQUENCY	PERCENT
None	4	11.8%
1 - 5	6	17.6%
6 - 10	4	11.8%
11 - 20	7	20.6%
21 - 50	7	20.6%
51 - 100	3	8.8%
Over 100	3	8.8%
Total	34	100.0%

Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

HOW DO YOU IDENTIFY THE SENSITIVE PLANTS YOU DON'T KNOW?

RESPONSE	FREQUENCY	PERCENT
Key in Jepson	37	78.7%
Expert review	37	78.7%
Web	26	55.3%
Consult staff botanist	6	12.8%
Key in Flora of North America	4	8.5%
Other	18	38.3%

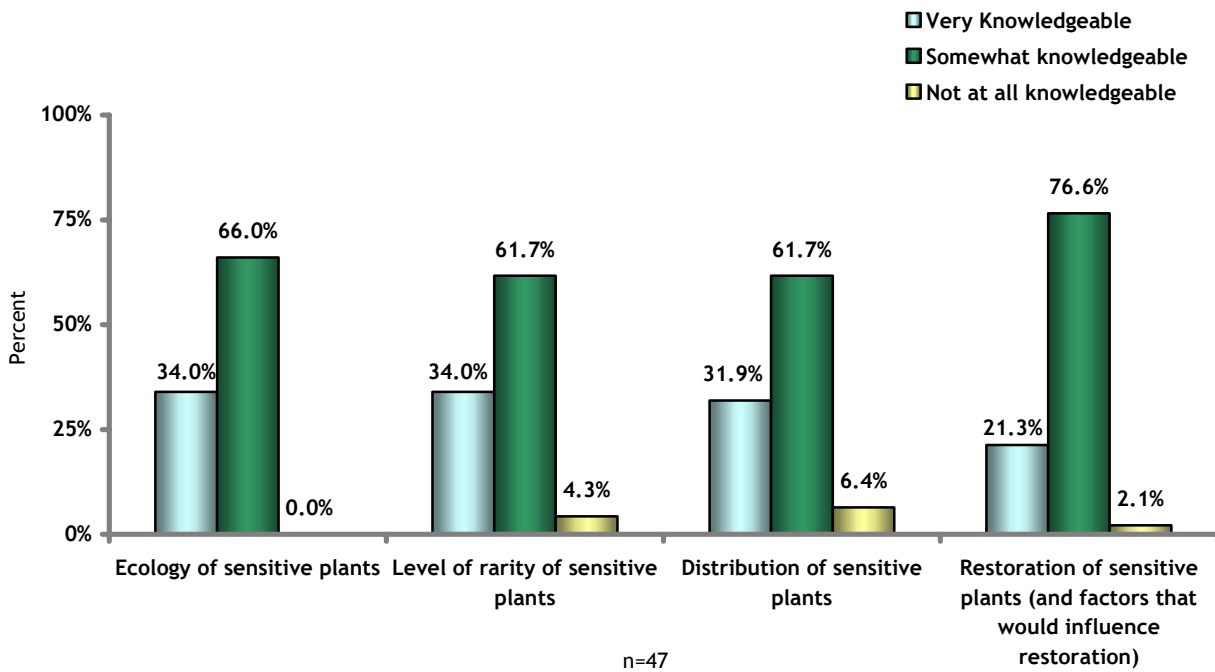
Multiple response question with 47 respondents offering 128 responses.

Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

Respondents were asked about their knowledge about specific aspects of sensitive plants. About one-third reported being “very knowledgeable” and two-thirds or more reported being “somewhat knowledgeable” about the ecology, level of rarity, distribution and restoration of sensitive plants.

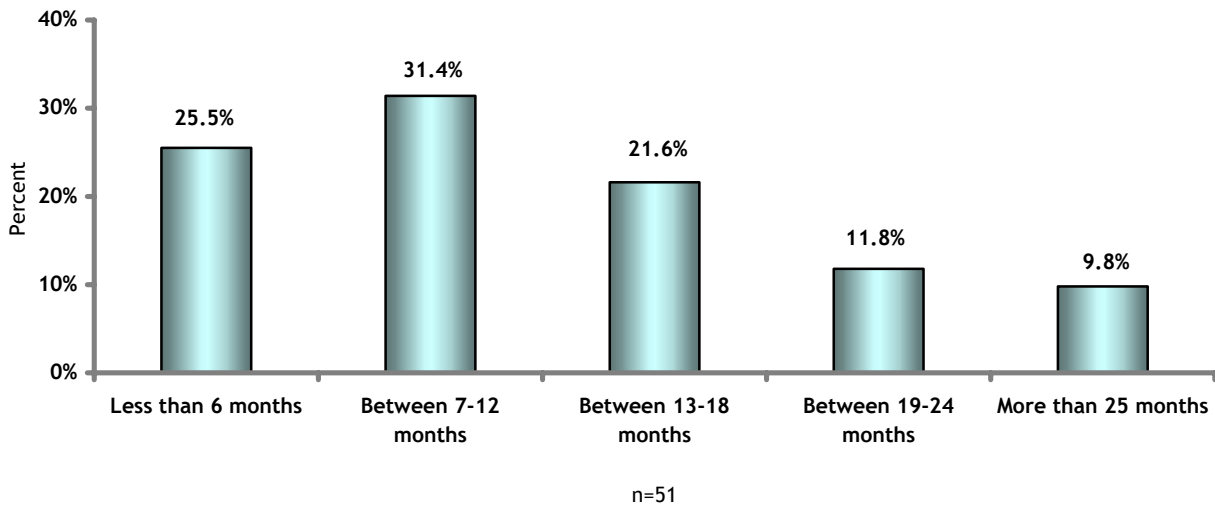
Finally, when asked how rapidly they believe relevant and applicable new information develops in their field, 26% of respondents thought new information developed in “less than six months” while 31% said “between 7 and 12 months.” Only 10% of respondents thought new information developed in more than two years. When asked how important it is that they receive additional training on biology, ecology, and resource conservation to be more effective at their job, 37% of respondents said this was “imperative,” 55% said it was “important” and 8% said it was “not very important.”

HOW KNOWLEDGEABLE ARE YOU ABOUT:



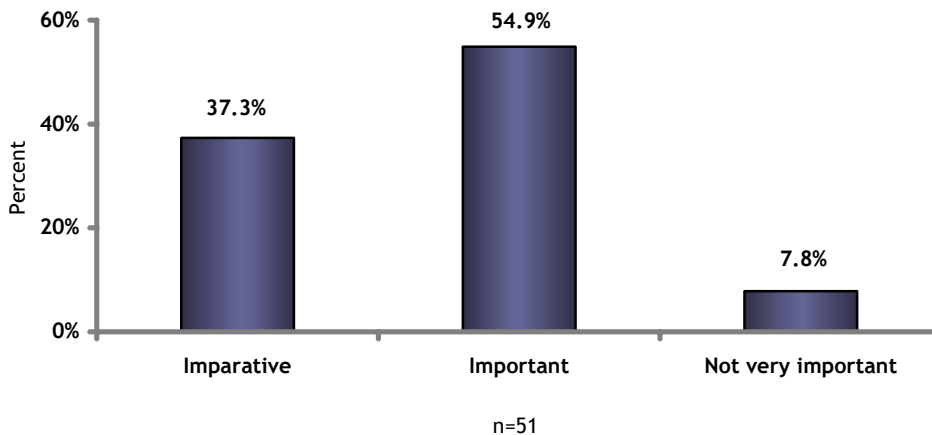
Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

IN YOUR OPINION, HOW RAPIDLY DOES RELEVANT AND APPLICABLE NEW INFORMATION DEVELOP IN YOUR FIELD?



Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

TO BE MORE EFFECTIVE AT YOUR JOB, HOW IMPORTANT IS IT THAT YOU RECEIVE ADDITIONAL TRAINING ON BIOLOGY, ECOLOGY, AND RESOURCE CONSERVATION?



Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2003 and 2005.

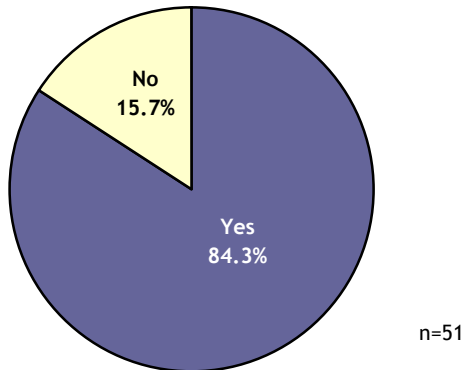
CONTINUING EDUCATION

As relevant and applicable new information reportedly develops fairly rapidly, biological consultants must keep their knowledge base up-to-date. Eighty-four percent of web survey respondents indicated that they have taken additional classes that are relevant to their trade since receiving their educational degree. The highest percentage said they attended a class between “0-6 months ago” (44%) followed by “1-2 years ago” (23%). Forty-two percent of respondents said the class were provided by a college or university while 37% said it was provided by a non-profit education group.

Elkhorn Slough National Estuarine Research Reserve
COASTAL TRAINING PROGRAM WEB SURVEY

It would appear, then, that these biological consultants are active in keeping current on new and developing information relevant to their trade.

SINCE RECEIVING YOUR EDUCATIONAL DEGREE, HAVE YOU TAKEN ANY ADDITIONAL CLASSES THAT ARE RELEVANT TO YOUR TRADE?



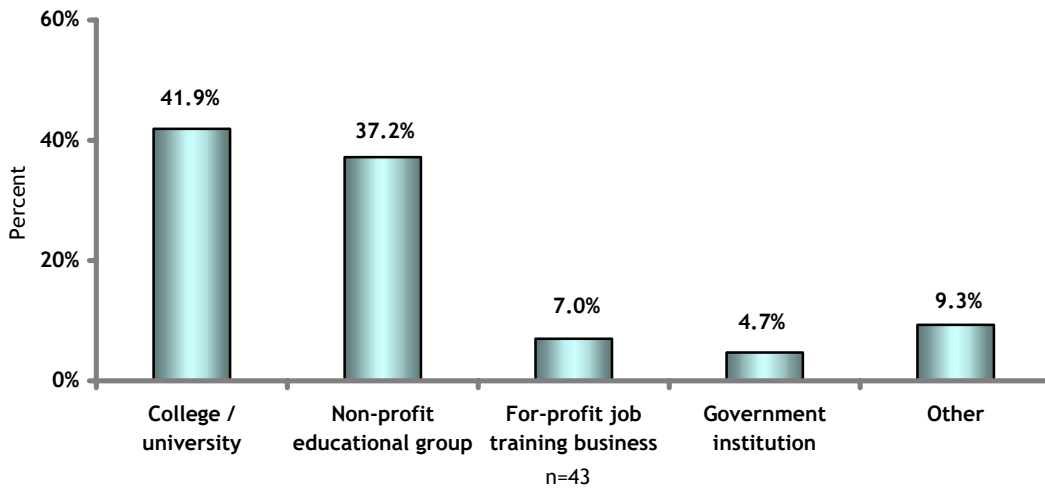
Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

WHEN WAS THE LAST TIME YOU ATTENDED A CLASS?

RESPONSE	FREQUENCY	PERCENT
0-6 months ago	19	44.2%
7-12 months ago	6	14.0%
1-2 years ago	10	23.3%
3-5 years ago	6	14.0%
6-10 years ago	2	4.7%
Total	43	100.0%

Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

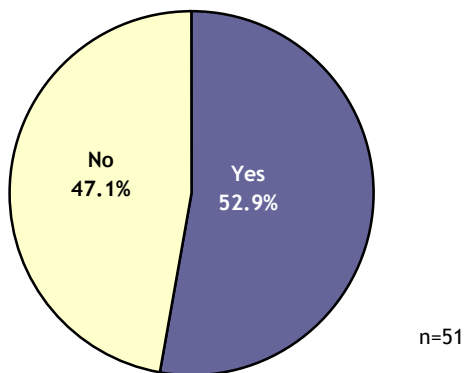
WHAT KIND OF INSTITUTION PROVIDED THE CLASS?



Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

Finally, when asked if they were published in a peer-review journal, respondents were basically evenly split between having been published and not having been published in a peer-reviewed journal (53% and 47%, respectively).

ARE YOU PUBLISHED IN A PEER-REVIEWED JOURNAL?

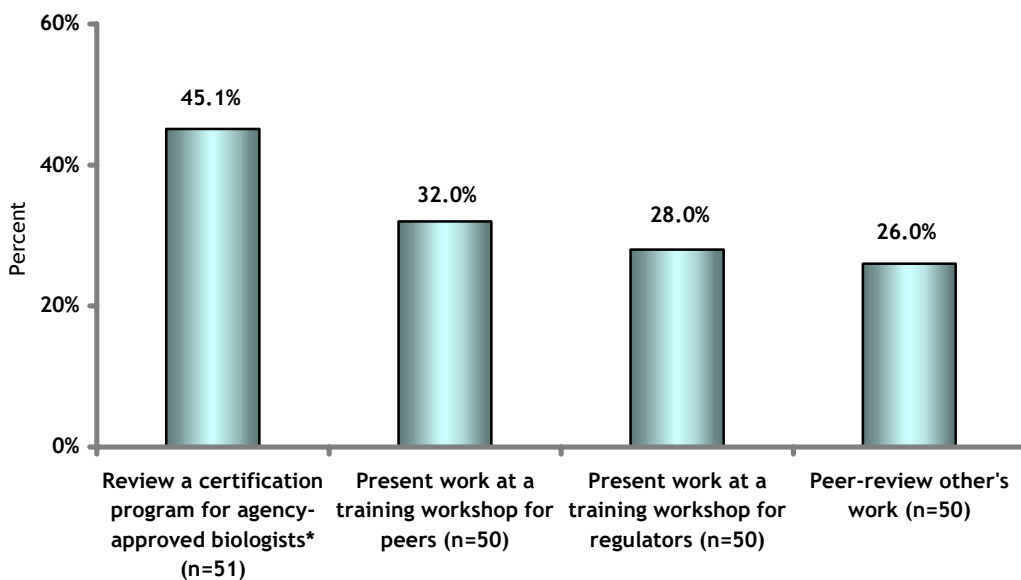


Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

Post-Coastal Training Program Workshop Activities

When asked if they would be interested in participating in after-workshop activities, 45% of respondents said they would be “very interested” in participating in a certification program for agency-approved biologists. This program would certify participants as a high-quality biologist who participates in continuing education designed to familiarize them with the science and practice of natural resource conservation in coastal California. Thirty-two percent of respondents said they would be “very interested” in presenting their work at a training workshop for peers.

HOW INTERESTED WOULD YOU BE IN PARTICIPATING IN THE FOLLOWING ACTIVITIES AFTER ATTENDING A COASTAL TRAINING PROGRAM WORKSHOP? RESPONDENTS INDICATING “VERY INTERESTED”



Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

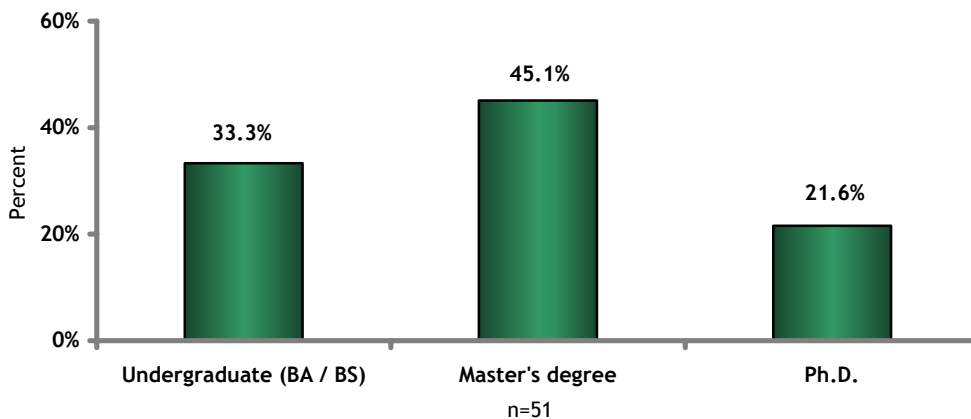
* Actual question was: “Review a certification program for agency-approved biologists, which would certify someone as a high-quality biologist who participates in continuing education designed to familiarize them with the science and practice of natural resource conservation in coastal California.”

Respondent Demographics

Web survey respondents were asked several demographic questions to provide a profile of the group of biological consultants who responded to the survey. When asked about their educational status, 45% of respondents reported having a Master’s degree, 33% said they had a BA or a BS degree, and 22% reported having a Ph.D. Respondents seemed to be relatively recent graduates with the greatest percentage of respondents (40%) having received their degree between 1990 and 1999 followed by 23% graduating between 2000 and 2005. Only one respondent (2%) reported graduating between 1960 and 1969.

EDUCATIONAL STATUS

WHAT WAS THE HIGHEST LEVEL OF EDUCATION THAT YOU RECEIVED AT SCHOOL?



Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

YEAR OF GRADUATION:

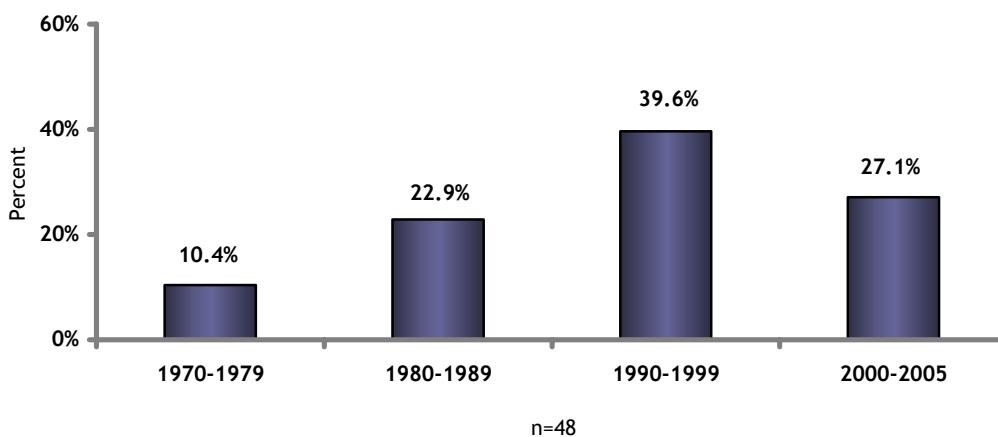
RESPONSE	FREQUENCY	PERCENT
1960 - 1969	1	2.1%
1970 - 1979	8	17.0%
1980 - 1989	8	17.0%
1990 - 1999	19	40.4%
2000 - 2005	11	23.4%
Total	47	100.0%

Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

CONSULTING AND WORK STATUS

When asked what year they began consulting, 40% of respondents reported beginning consulting between “1990 and 1999” followed by 27% between “2000 and 2005” and 23% between “1980 and 1989.” Web survey respondents were also asked what type of work is performed at their company. Respondents were provided with several answers and they could choose as many as were applicable. Ninety-two percent said their company did “management plans,” 86% said “restoration plans,” and 82% said “restoration oversight.”

WHAT YEAR DID YOU BEGIN CONSULTING?



Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

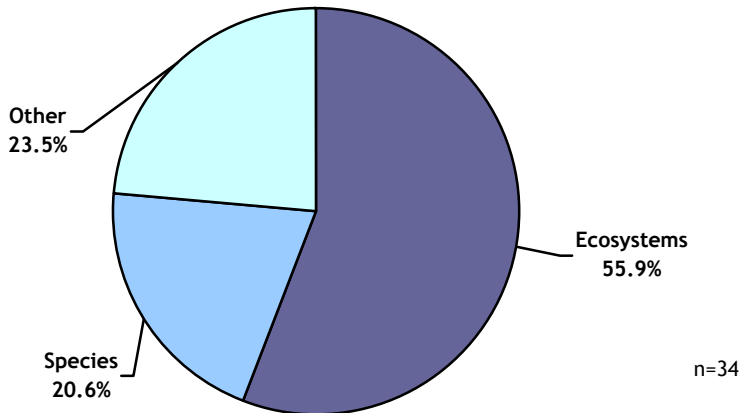
WHAT TYPE OF WORK IS PERFORMED AT YOUR COMPANY?

RESPONSE	FREQUENCY	PERCENT
Management plans	46	92.0%
Restoration plans	43	86.0%
Restoration oversight	41	82.0%
CEQA	38	76.0%
Restoration implementation	38	76.0%
EIR	37	74.0%
Management implementation	35	70.0%
EIS	34	68.0%
Management oversight	34	68.0%
NEPA	33	66.0%
Scientific research	26	52.0%

Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.
 Multiple response question with 50 respondents offering 405 responses.

Finally, those respondents who have a Master's degree or a Ph.D. were asked about the focus of their research. Fifty-six percent of respondents said the focus of their research was "ecosystems" and 21% said "species." Twenty-four percent indicated their research was focused on other topics.

IF YOU HAVE A MASTER'S DEGREE OR PH.D., WHAT IS THE FOCUS OF YOUR RESEARCH?



Source: Elkhorn Slough National Estuarine Research Reserve, Coastal Training Program Web Survey, 2005.

Appendix 1: Overall Survey Results

1. PLEASE RATE YOUR PREFERENCE OF DAYS FOR TRAINING WORKSHOPS

RESPONSE	GOOD	ACCEPTABLE	BAD	BASE
Monday	20.4%	32.7%	46.9%	49
Tuesday	37.5%	47.9%	14.6%	48
Wednesday	45.8%	37.5%	16.7%	48
Thursday	46.9%	40.8%	12.2%	49
Friday	30.6%	46.9%	22.4%	49
Saturday	28.0%	38.0%	34.0%	50
Sunday	22.4%	18.4%	59.2%	49

2. PLEASE RATE THE FOLLOWING TIMES OF YEAR FOR YOU TO ATTEND TRAINING WORKSHOPS

RESPONSE	GOOD	ACCEPTABLE	BAD	BASE
January	69.4%	26.5%	4.1%	49
February	60.0%	36.0%	4.0%	50
March	44.0%	48.0%	8.0%	50
April	26.5%	59.2%	14.3%	49
May	30.0%	48.0%	22.0%	50
June	30.0%	36.0%	34.0%	50
July	34.7%	38.8%	26.5%	49
August	39.6%	37.5%	22.9%	48
September	38.0%	44.0%	18.0%	50
October	55.1%	28.6%	16.3%	49
November	51.0%	36.7%	12.2%	49
December	34.7%	30.6%	34.7%	49

3. IS THE ELKHORN SLOUGH/MOSS LANDING AREA CONVENIENT TO ATTEND A HALF-DAY OR DAY-LONG WORKSHOP?

RESPONSE	FREQUENCY	PERCENT
Yes	35	68.6%
Sometimes	14	27.5%
No	2	3.9%
Total	51	100.0%

COASTAL TRAINING PROGRAM WEB SURVEY: OVERALL SURVEY RESULTS**4. WHERE WOULD YOU PREFER TO ATTEND TRAINING WORKSHOPS?**

RESPONSE	FREQUENCY	PERCENT
Santa Cruz	24	49.0%
Watsonville	6	12.2%
Monterey	5	10.2%
No preference	4	8.2%
Bay area(San Francisco/Marin/East Bay)	4	8.2%
San Luis Obispo	2	4.1%
Salinas	1	2.0%
Other	3	6.1%
Total	49	100.0%

5. HOW USEFUL ARE THE FOLLOWING SOURCES OF INFORMATION IN LEARNING ABOUT ENVIRONMENTAL ISSUES?

RESPONSE	VERY USEFUL	SOMEWHAT USEFUL	NOT AT ALL USEFUL	BASE
Scientific/Professional conferences	80.4%	19.6%	0.0%	51
Workshops	78.0%	20.0%	2.0%	50
Web	74.5%	23.5%	2.0%	51
Colleagues at work	72.0%	24.0%	4.0%	50
Peer-reviewed papers	66.0%	34.0%	0.0%	50
Books	58.0%	38.0%	4.0%	50
Regulatory agency biologists	51.0%	47.1%	2.0%	51
California Natural Diversity Database	49.0%	44.9%	6.1%	49
Environmental review documents	48.0%	50.0%	2.0%	50
University researchers	43.1%	52.9%	3.9%	51
Continuing education classes	40.0%	52.0%	8.0%	50
Unpublished reports	39.2%	56.9%	3.9%	51
Colleagues at other companies	38.0%	56.0%	6.0%	50
Government publications	32.0%	62.0%	6.0%	50
Planning conferences	25.5%	66.7%	7.8%	51
NGO publications or events	24.5%	67.3%	8.2%	49
Museums/natural area visitor centers	18.0%	60.0%	22.0%	50
Brochures/Fliers	16.0%	66.0%	18.0%	50
Radio	7.8%	49.0%	43.1%	51
Television	4.0%	44.0%	52.0%	50

COASTAL TRAINING PROGRAM WEB SURVEY: OVERALL SURVEY RESULTS**6. WHICH OF THE FOLLOWING EDUCATIONAL FORMATS DO YOU PREFER?**

RESPONSE	FREQUENCY	PERCENT
Workshop	40	78.4%
Written material	38	74.5%
Website	33	64.7%
Electronic material	28	54.9%
ISR (Independent Scientific Review)	12	23.5%

Multiple response question with 51 respondents offering 151 responses.

7. WHICH OF THE FOLLOWING WORKSHOP SCHEDULES DO YOU PREFER?

RESPONSE	FREQUENCY	PERCENT
Half day workshop with field trip	21	41.2%
Full day workshop with field trip	20	39.2%
Full day workshop	6	11.8%
Half day workshop	4	7.8%
Total	51	100.0%

8. WHICH OF THE FOLLOWING WORKSHOP STRUCTURES DO YOU PREFER?

RESPONSE	FREQUENCY	PERCENT
Presentations	40	80.0%
Field trips	37	74.0%
Question and Answer	28	56.0%
Panel discussion	23	46.0%
Workgroups	15	30.0%

Multiple response question with 50 respondents offering 143 responses.

COASTAL TRAINING PROGRAM WEB SURVEY: OVERALL SURVEY RESULTS**9. WHICH OF THE FOLLOWING MATERIALS WOULD YOU FIND USEFUL AS PART OF A TRAINING WORKSHOP?**

RESPONSE	VERY USEFUL	SOMEWHAT USEFUL	NOT AT ALL USEFUL	BASE
Copies of peer-reviewed published papers on the workshop issue	86.0%	12.0%	2.0%	50
A summary bibliography on the workshop issue	70.6%	27.5%	2.0%	51
Written abstracts of presentations	66.7%	31.4%	2.0%	51
Contact information for the attendees	62.7%	37.3%	0.0%	51
CD of slides/PowerPoint presentations	44.0%	44.0%	12.0%	50
Printouts of slides/PowerPoint presentations	39.2%	58.8%	2.0%	51
Web-streamed video of the workshop	14.0%	32.0%	54.0%	50
DVD (video) of the workshop	10.4%	47.9%	41.7%	48
VHS video of the workshop	2.0%	32.7%	65.3%	49

10. HOW VALUABLE ARE THE FOLLOWING GROUPS AS POTENTIAL WORKSHOP PRESENTERS?

RESPONSE	VERY VALUABLE	SOMEWHAT VALUABLE	NOT AT ALL VALUABLE	BASE
Independent biologists	76.5%	23.5%	0.0%	51
Federal regulatory agency personnel	66.7%	33.3%	0.0%	51
State regulatory agency personnel	66.7%	33.3%	0.0%	51
State lands managers	64.0%	36.0%	0.0%	50
Federal lands managers	62.7%	37.3%	0.0%	51
NGO lands managers	54.9%	45.1%	0.0%	51
Local regulatory personnel	54.9%	43.1%	2.0%	51
Tenured university faculty	52.9%	43.1%	3.9%	51
Graduate students	41.2%	56.9%	2.0%	51

COASTAL TRAINING PROGRAM WEB SURVEY: OVERALL SURVEY RESULTS**11. WITH WHAT OTHER GROUPS WOULD IT BE IMPORTANT FOR YOU TO INTERACT DURING WORKSHOPS FEATURING ECOLOGICAL/RESOURCE CONSERVATION INFORMATION?**

RESPONSE	VERY VALUABLE	SOMEWHAT VALUABLE	NOT AT ALL VALUABLE	BASE
Regulatory agency personnel	72.5%	27.5%	0.0%	51
People in similar positions to yourself at other agencies	66.0%	34.0%	0.0%	50
Farmers (or groups representing them)	43.1%	45.1%	11.8%	51
Non-governmental environmental organizations	36.0%	62.0%	2.0%	50
Farm advisors with state or federal agencies	35.3%	45.1%	19.6%	51
Fishermen (or groups representing them)	27.5%	41.2%	31.4%	51
Business owners (or groups representing them)	27.1%	54.2%	18.8%	48
People within your agency	22.2%	66.7%	11.1%	45
Politicians and their staff	19.6%	56.9%	23.5%	51

12. DO YOU THINK IT IS IMPORTANT TO HAVE TIME TO NETWORK DURING THE WORKSHOPS?

RESPONSE	FREQUENCY	PERCENT
Yes	45	91.8%
No	4	8.2%
Total	49	100.0%

13. IF IT WAS NECESSARY TO CHARGE A FEE, HOW MUCH WOULD YOU BE WILLING TO PAY FOR A ONE DAY WORKSHOP?

RESPONSE	FREQUENCY	PERCENT
Less that \$25	4	7.8%
\$26 - \$50	14	27.5%
\$51 - \$75	13	25.5%
\$76 - \$100	15	29.4%
More than \$100	5	9.8%
Total	51	100.0%

COASTAL TRAINING PROGRAM WEB SURVEY: OVERALL SURVEY RESULTS

14. DO ANY OF THE FOLLOWING INHIBIT YOUR ATTENDANCE AT TRAINING WORKSHOPS?

RESPONSE	MAJOR PROBLEM	SOMEWHAT OF A PROBLEM	NOT A PROBLEM	BASE
Workload	62.0%	32.0%	6.0%	50
Schedule of training (length or time offered)	27.5%	51.0%	21.6%	51
Lack of relevant educational program subjects	18.0%	52.0%	30.0%	50
Location of training	13.7%	51.0%	35.3%	51
Family obligations	7.8%	43.1%	49.0%	51
Supervisor denies permission	5.9%	11.8%	82.4%	51
Financial costs of attending training	0.0%	51.0%	49.0%	51

15. DO ANY OF THE FOLLOWING INHIBIT YOUR ATTENDANCE AT TRAINING WORKSHOPS?

RESPONSE	ALL OF THE TIME	FREQUENTLY	SOME OF THE TIME	INFREQUENTLY	NEVER	BASE
Budget did not allow for extra scientific research	7.8%	41.2%	37.3%	9.8%	3.9%	51
Budget did not allow for extra field time	2.0%	33.3%	47.1%	15.7%	2.0%	51
The laws do not support implementation of latest science	3.9%	27.5%	27.5%	35.3%	5.9%	51
Lack of understanding by clients	4.0%	26.0%	42.0%	22.0%	6.0%	50
Budget did not allow for sufficient analysis time	0.0%	23.5%	54.9%	17.6%	3.9%	51
Lack of understanding by regulators overseeing project	2.0%	21.6%	43.1%	27.5%	5.9%	51
Lack of understanding by senior colleagues	0.0%	9.8%	19.6%	45.1%	25.5%	51
Information and conclusions presented were not clear enough to implement	0.0%	9.8%	33.3%	43.1%	13.7%	51
Lack of societal support for environmental regulation	0.0%	7.8%	39.2%	35.3%	17.6%	51

16. WHAT PERCENTAGE OF YOUR JOB IS FOCUSED ON SENSITIVE PLANTS?

RESPONSE	FREQUENCY	PERCENT
None	4	8.0%
1-15%	12	24.0%
16-30%	7	14.0%
31-50%	12	24.0%
51-75%	9	18.0%
76-100%	6	12.0%
Total	50	100.0%

COASTAL TRAINING PROGRAM WEB SURVEY: OVERALL SURVEY RESULTS**17. APPROXIMATELY HOW MANY SENSITIVE PLANTS (COVERED BY CEQA) CAN YOU COMFORTABLY IDENTIFY IN THE FIELD?**

RESPONSE	FREQUENCY	PERCENT
None	4	11.8%
1 - 5	6	17.6%
6 - 10	4	11.8%
11 - 20	7	20.6%
21 - 50	7	20.6%
51 - 100	3	8.8%
Over 100	3	8.8%
Total	34	100.0%

18. HOW DO YOU IDENTIFY THE SENSITIVE PLANTS YOU DON'T KNOW?

RESPONSE	FREQUENCY	PERCENT
Key in Jepson	37	78.7%
Expert review	37	78.7%
Web	26	55.3%
Consult staff botanist	6	12.8%
Key in Flora of North America	4	8.5%
Other	18	38.3%

Multiple response question with 47 respondents offering 128 responses.

Other responses:

- CalFlora website.
- Check with herbarium specimens.
- Compare with specimens in herbarium.
- Comparison with herbarium specimens at UC or Cal Academy.
- Herbarium.
- Herbarium review local floras (Hoover, Matthews, Smith, Thoms, Twisselman) Abrams McMinn Munz.
- I would like more workshops on plant ID. I also use personal photos taken in field and reference books in my library.
- I'm not a botanist, so this question is only marginally relevant.
- Key in local flora.
- Key in Monterey flora.
- Local floras.
- Local herbaria Local Floras Native plant nurseries (local).

COASTAL TRAINING PROGRAM WEB SURVEY: OVERALL SURVEY RESULTS

- Matthews and Hickman.
- Matthews key, local herbaria.
- Munns, local floras.
- Other field guides.
- Other references, such as local flora. Also, Munz and Abrams (to confirm findings in Jepson).
- Plants of the SF Bay Munz Flora of California.

19. HOW KNOWLEDGEABLE ARE YOU ABOUT

RESPONSE	VERY KNOWLEDGEABLE	SOMEWHAT KNOWLEDGEABLE	NOT AT ALL KNOWLEDGEABLE	BASE
Ecology of sensitive plants	34.0%	66.0%	0.0%	47
Level of rarity of sensitive plants	34.0%	61.7%	4.3%	47
Distribution of sensitive plants	31.9%	61.7%	6.4%	47
Restoration of sensitive plants (and factors that would influence restoration)	21.3%	76.6%	2.1%	47

20. DOES YOUR JOB REQUIRE YOU TO CONSULT ON COMMON PLANTS?

RESPONSE	FREQUENCY	PERCENT
Yes	44	86.3%
No	7	13.7%
Total	51	100.0%

21. HOW DO YOU IDENTIFY THE COMMON PLANTS YOU DON'T KNOW?

RESPONSE	FREQUENCY	PERCENT
Key in Jepson	36	81.8%
Web	29	65.9%
Expert review	28	63.6%
Key in Flora of North America	5	11.4%
Consult staff botanist	4	9.1%
Other	15	34.1%

Multiple response question with 44 respondents offering 117 responses.

Other responses:

- Calflora.
- Compare with specimen in herbaria.
- Herbarium.
- Key in local flora.

COASTAL TRAINING PROGRAM WEB SURVEY: OVERALL SURVEY RESULTS

- Key in other floras.
- Local floras.
- Local floras herbarium review munz abrams mcminn etc.
- Matthews and Hickman.
- Matthews key, local herbaria.
- Other field guides.
- Personal photos, reference books.
- Plants of SF Bay Area and other regional floral guides.
- Plants of the SF Bay Munz's Flora of California.
- Use local flora, Munz and Abrams (if necessary).
- Western Garden Book Local Floras Local herbaria, when available Local nurseries.

22. DOES YOUR JOB REQUIRE YOU TO CONSULT ON WILDLIFE SPECIES?

RESPONSE	FREQUENCY	PERCENT
Yes	35	79.5%
No	9	20.5%
Total	44	100.0%

23. HOW KNOWLEDGEABLE ARE YOU ABOUT WILDLIFE SPECIES?

RESPONSE	FREQUENCY	PERCENT
Very knowledgeable	19	54.3%
Somewhat knowledgeable	14	40.0%
Not at all knowledgeable	2	5.7%
Total	35	100.0%

24. WHICH OF THE FOLLOWING NAMING METHODOLOGIES DO YOU USE TO LABEL PLANT COMMUNITIES?

RESPONSE	FREQUENCY	PERCENT
Sawyer and Keeler-Wolf	41	80.4%
Holland	36	70.6%
CDFG	29	56.9%
Other	12	23.5%

Multiple response question with 51 respondents offering 118 responses.

Other responses:

- CA Plant Life text by Ornduff (revised).

COASTAL TRAINING PROGRAM WEB SURVEY: OVERALL SURVEY RESULTS

- HEP, Cowardin.
- I do not believe that communities are actual entities, but are useful in a heuristic sense.
- May use project specific classifications if standard methodologies don't fit (such as for habitats that have been affected by development or other human influences).
- N/A.
- Natural Resources Conservation Service US Forest Service.
- Publications.
- Shuford and Timossi (Marin County); Cowardin et al (USFWS 1979 - wetland communities).
- Society for Range management Kuchler.
- Terrestrial Veget. of California (UC Press).
- We often devise our own categories based on the sources listed above to better fit our project site.
- WHR.

25. WHAT SURVEY METHODOLOGY DO YOU MOST COMMONLY USE TO MAP VEGETATION/PLANT COMMUNITIES?

RESPONSE	FREQUENCY	PERCENT
I use aerial photos to map patterns I have surveyed on the ground	19	37.3%
I am familiar with the composition of plant communities and map what I see in the ground	17	33.3%
I take transect-based vegetation cover data	4	7.8%
I use a relevé technique	3	5.9%
Other	8	15.7%
Total	51	100.0%

Other responses:

- This question should allow multiple answers to the items listed. I use 1, 3, 4, 5 depending on the projects' requirements.
- No one method is used most commonly; each is applied where appropriate.
- Mostly a combination of all the above...depending upon the project and data collection parameters.
- I use the first two choices most frequently; plot, transect and relevé methods next. I do not use the CNPS/CDFG methodology because I have not taken the time to learn it well enough to be comfortable with it.

COASTAL TRAINING PROGRAM WEB SURVEY: OVERALL SURVEY RESULTS

- I don't engage in mapping vegetation because other persons in the firm specialize in this function.
- I don't do this.
- I do not map vegetation.
- Botanical staff working on projects I oversee as Principal map veg communities.

26. DOES YOUR JOB REQUIRE YOU TO CONSULT ON LAND MANAGEMENT?

RESPONSE	FREQUENCY	PERCENT
Yes	51	100.0%
No	0	0.0%
Total	51	100.0%

27. DOES YOUR JOB REQUIRE YOU TO CONSULT ON PLANT OR ANIMAL SPECIES/HABITAT RESTORATION?

RESPONSE	FREQUENCY	PERCENT
Yes	50	98.0%
No	1	2.0%
Total	51	100.0%

28. DOES YOUR JOB REQUIRE YOU TO CONSULT ON SCIENTIFIC RESEARCH?

RESPONSE	FREQUENCY	PERCENT
Yes	34	66.7%
No	17	33.3%
Total	51	100.0%

COASTAL TRAINING PROGRAM WEB SURVEY: OVERALL SURVEY RESULTS**29. PLEASE RATE YOUR INTEREST IN RECEIVING TRAINING IN THE FOLLOWING SUBJECTS**

RESPONSE	VERY INTERESTED	SOMEWHAT INTERESTED	NOT AT ALL INTERESTED	BASE
Habitat management	92.2%	7.8%	0.0%	51
Habitat restoration	90.2%	9.8%	0.0%	51
Species restoration	86.3%	13.7%	0.0%	51
Invasive species control	76.0%	24.0%	0.0%	50
Ecological buffer design	76.0%	22.0%	2.0%	50
Endangered species status and recovery	74.5%	23.5%	2.0%	51
Invasive species impacts	64.0%	34.0%	2.0%	50
Conservation of organisms	62.7%	37.3%	0.0%	51
Plant habitat mapping	55.1%	36.7%	8.2%	49
Wildlife habitat mapping	50.0%	36.0%	14.0%	50
Biology of organisms	49.0%	43.1%	7.8%	51
Recreation planning for natural areas	16.7%	62.5%	20.8%	48
Polluted runoff	12.0%	62.0%	26.0%	50

30. PLEASE INDICATE WHICH OF THE FOLLOWING SPECIFIC SUBJECT AREAS YOU WOULD BE INTERESTED IN:**30A. POPULATION STATUS AND RECOVERY METHODS FOR ENDANGERED SPECIES.**

RESPONSE	FREQUENCY	PERCENT
California tiger salamander	40	80.0%
Steelhead trout	30	60.0%
Chorizanthe robusta robusta	26	52.0%
Gilia tenuiflora arenaria	21	42.0%
Arctostaphylos pajaricensis	21	42.0%
Other	16	32.0%

Multiple response question with 50 respondents offering 154 responses.

COASTAL TRAINING PROGRAM WEB SURVEY: OVERALL SURVEY RESULTS**30B. METHODS FOR THE CONSERVATION OF LOCAL HABITATS.**

RESPONSE	FREQUENCY	PERCENT
Freshwater wetlands	45	88.2%
Riparian systems	44	86.3%
Coast live oak woodlands	42	82.4%
Estuaries/Tidal wetlands	36	70.6%
Mixed woodlands (bay, tanoak, Douglas fir, etc)	34	66.7%
Coastal prairie	34	66.7%
Coastal dunes	33	64.7%
Maritime chaparral	31	60.8%
Redwood forests	26	51.0%

Multiple response question with 51 respondents offering 325 responses.

30C. INVASIVE SPECIES ECOLOGICAL IMPACTS AND LIFE HISTORY OF:

RESPONSE	FREQUENCY	PERCENT
Non-native annual grasses	38	79.2%
Pampass grass	29	60.4%
Poison hemlock	29	60.4%
French broom	29	60.4%
Ice plant	22	45.8%
Veldt grass	22	45.8%
Acacia	20	41.7%
Other	15	31.3%

Multiple response question with 48 respondents offering 204 responses.

30D. INVASIVE SPECIES CONTROL OF:

RESPONSE	FREQUENCY	PERCENT
Non-native annual grasses	40	81.6%
Poison hemlock	32	65.3%
Pampass grass	31	63.3%
French broom	31	63.3%
Veldt grass	27	55.1%
Ice plant	24	49.0%
Acacia	23	46.9%
Other	17	34.7%

Multiple response question with 49 respondents offering 225 responses.

COASTAL TRAINING PROGRAM WEB SURVEY: OVERALL SURVEY RESULTS**31. WHICH OF THESE OTHER CTP SERVICES WOULD YOU BE LIKELY TO UTILIZE?**

RESPONSE	FREQUENCY	PERCENT
Independent scientific review of a scientific question you may have	34	72.3%
Continuing education credit for workshops or other recognition systems	26	55.3%
Independent scientific review of controversial or high-impact projects	20	42.6%
Independent scientific review of a document you produce	17	36.2%

Multiple response question with 47 respondents offering 97 responses.

32. HOW INTERESTED WOULD YOU BE IN PARTICIPATING IN THE FOLLOWING ACTIVITIES AFTER ATTENDING A COASTAL TRAINING PROGRAM WORKSHOP?

RESPONSE	VERY INTERESTED	SOMEWHAT INTERESTED	NOT AT ALL INTERESTED	BASE
Review a certification program for agency-approved biologists, which would certify someone as a high-quality biologist who participates in continuing education designed to familiarize them with the science and practice of natural resource conservation in coastal California	45.1%	41.2%	13.7%	51
Present work at a training workshop for peers	32.0%	58.0%	10.0%	50
Present work at a training workshop for regulators	28.0%	60.0%	12.0%	50
Peer-review others' work	26.0%	60.0%	14.0%	50

33. WHAT WAS THE HIGHEST LEVEL OF EDUCATION THAT YOU RECEIVED AT SCHOOL?

RESPONSE	FREQUENCY	PERCENT
Undergraduate (BA/BS)	17	33.3%
Masters	23	45.1%
Ph.D.	11	21.6%
Total	51	100.0%

COASTAL TRAINING PROGRAM WEB SURVEY: OVERALL SURVEY RESULTS**33A. YEAR OF GRADUATION:**

RESPONSE	FREQUENCY	PERCENT
1960 - 1969	1	2.1%
1970 - 1979	8	17.0%
1980 - 1989	8	17.0%
1990 - 1999	19	40.4%
2000 - 2005	11	23.4%
Total	47	100.0%

34. IF YOU HAVE A MASTERS DEGREE OR PH.D., WHAT IS THE FOCUS OF YOUR RESEARCH?

RESPONSE	FREQUENCY	PERCENT
Ecosystem	19	55.9%
Species	7	20.6%
Other	8	23.5%
Total	34	100.0%

Other responses:

- Behavioral Ecology; population ecology; some community-based and species-specific research as well.
- Both ecosystem and species.
- City & Regional Planning.
- Grazing Effects.
- Plant physiology and soil science.
- Riparian restoration.
- Salt marsh ecology.
- Stream restoration, Watershed Management, Soil Conservation.

35. SINCE RECEIVING YOUR EDUCATIONAL DEGREE, HAVE YOU TAKEN ANY ADDITIONAL CLASSES THAT ARE RELEVANT TO YOUR TRADE?

RESPONSE	FREQUENCY	PERCENT
Yes	43	84.3%
No	8	15.7%
Total	51	100.0%

35A. WHEN WAS THE LAST TIME YOU ATTENDED A CLASS?

RESPONSE	FREQUENCY	PERCENT
0-6 months ago	19	44.2%
7-12 months ago	6	14.0%
1-2 years ago	10	23.3%
3-5 years ago	6	14.0%
6-10 years ago	2	4.7%
Total	43	100.0%

35B. WHAT KIND OF INSTITUTION PROVIDED THE CLASS?

RESPONSE	FREQUENCY	PERCENT
College/University	18	41.9%
Nonprofit Educational Group	16	37.2%
For Profit Job Training Business	3	7.0%
Government Institution	2	4.7%
Other	4	9.3%
Total	43	100.0%

Other responses:

- In-house training classes.
- The Wildlife Society.
- 1-2 day updates on HCP/NCCP; CEQA; etc.
- Western Section of the Wildlife Society.

36. ARE YOU PUBLISHED IN A PEER-REVIEWED SCIENTIFIC JOURNAL?

RESPONSE	FREQUENCY	PERCENT
Yes	27	52.9%
No	24	47.1%
Total	51	100.0%

37. TO BE MORE EFFECTIVE AT YOUR JOB, HOW IMPORTANT IS IT THAT YOU RECEIVE ADDITIONAL TRAINING ON BIOLOGY, ECOLOGY, AND RESOURCE CONSERVATION?

RESPONSE	FREQUENCY	PERCENT
Imperative	19	37.3%
Important	28	54.9%
Not very important	4	7.8%
Total	51	100.0%

COASTAL TRAINING PROGRAM WEB SURVEY: OVERALL SURVEY RESULTS**38. DO YOU CONSIDER YOURSELF TO BE CURRENT ON ENVIRONMENTAL ISSUES RELATIVE TO YOUR WORK?**

RESPONSE	FREQUENCY	PERCENT
Yes	49	96.1%
No	2	3.9%
Total	51	100.0%

39. IN GENERAL, HOW OFTEN DO YOU FEEL YOU HAVE ENOUGH BACKGROUND TRAINING TO PERFORM THE BIOLOGICAL CONSULTING DUTIES YOU ARE ASSIGNED?

RESPONSE	FREQUENCY	PERCENT
All of the time	34	66.7%
Some of the time	17	33.3%
Not very often	0	0.0
Total	51	100.0%

39A. PLEASE EXPLAIN

- We work in a wide range of habitats and cannot be intimately familiar with the workings of all of them. So we frequently consult with other professionals and other informational sources. It is imperative for professionals to know and understand the limits of their expertise (as well as their assumptions and prejudices!).
- This calls for an opportunity to check “Most of the Time”.
- I usually need to re-familiarize myself with the regs, and get updated during the course of a project.
- I am sometimes asked to write about and analyze issues in which my background is limited. However, I do have support within my organization to call on people with expertise in these areas.
- I am not trained as a scientist yet I prepare and review environmental documents and plans. The paucity of trained scientists in the more political arena is unfortunate.
- I always run across something I need to review or read up on – so, I guess that means that I don't have enough training. In general, I don't have many deficiencies in that regard.
- Given unknowns certainly this would be hard to specify.
- Environmental consulting is inherently multidisciplinary. In my thinking, folks who say they always feel comfortable with their knowledge/level of competency probably just don't see how much they don't know, and how learning more could enhance their effectiveness. CTP is one of the tools I use to maintain and increase my knowledge/understanding and enhance my effectiveness.
- Actually most of the time (not an option). Occasionally asked to write up information (impacts, mitigation, etc.) for species or habitats with which I am not familiar.

COASTAL TRAINING PROGRAM WEB SURVEY: OVERALL SURVEY RESULTS**40. IN YOUR OPINION, HOW RAPIDLY DOES RELEVANT AND APPLICABLE NEW INFORMATION DEVELOP IN YOUR FIELD?**

RESPONSE	FREQUENCY	PERCENT
Less than 6 months	13	25.5%
Between 7-12 months	16	31.4%
Between 13-18 months	11	21.6%
Between 19-24 months	6	11.8%
More than 25 months	5	9.8%
Total	51	100.0%

41. WHAT YEAR DID YOU BEGIN CONSULTING?

RESPONSE	FREQUENCY	PERCENT
1970 - 1979	5	10.4%
1980 - 1989	11	22.9%
1990 - 1999	19	39.6%
2000 - 2005	13	27.1%
Total	48	100.0%

42. WHAT IS YOUR ANNUAL SALARY?

RESPONSE	FREQUENCY	PERCENT
Less than \$24,999	2	4.1%
\$25,000 - 34,999	0	0.0%
\$35,000 - \$44,999	1	2.0%
\$45,000 - \$54, 999	12	24.5%
\$55,000 - \$64, 999	10	20.4%
\$65,000 - \$74, 999	6	12.2%
\$75,000 - \$84, 999	5	10.2%
\$85,000 or more	13	26.5%
Total	49	100.0%

43. WHAT YEAR WAS YOUR COMPANY FOUNDED?

RESPONSE	FREQUENCY	PERCENT
1960 - 1969	1	2.3%
1970 - 1979	18	40.9%
1980 - 1989	7	15.9%
1990 - 1999	15	34.1%
2000 - 2005	3	6.8%
Total	44	100.0%

COASTAL TRAINING PROGRAM WEB SURVEY: OVERALL SURVEY RESULTS**44. HOW MANY EMPLOYEES ARE IN YOUR COMPANY?**

RESPONSE	FREQUENCY	PERCENT
0 - 10	19	40.4%
11 -20	5	10.6%
21 - 30	2	4.3%
31 - 40	1	2.1%
41 - 50	8	17.0%
61 - 70	2	4.3%
101 - 500	7	14.9%
Over 500	3	6.4%
Total	47	100.0%

45. WHICH OF THE FOLLOWING COUNTIES DO YOU WORK IN?

RESPONSE	FREQUENCY	PERCENT
Santa Clara	37	75.5%
Monterey	36	73.5%
Santa Cruz	36	73.5%
San Mateo	33	67.3%
San Luis Obispo	25	51.0%
San Benito	24	49.0%
Santa Barbara	16	32.7%
Contra Costa	12	24.5%
Alameda	10	20.4%
Sonoma	10	20.4%
Central Valley	6	12.2%
Marin	6	12.2%
Fresno	5	10.2%
Kern	5	10.2%
Sacramento	5	10.2%
Solano	5	10.2%
Los Angeles	4	8.2%

COASTAL TRAINING PROGRAM WEB SURVEY: OVERALL SURVEY RESULTS**45. WHICH OF THE FOLLOWING COUNTIES DO YOU WORK IN? CONTINUED**

RESPONSE	FREQUENCY	PERCENT
Napa	4	8.2%
Lake	3	6.1%
Mendocino	3	6.1%
San Francisco	3	6.1%
San Joaquin	3	6.1%
Yolo	3	6.1%
Calaveras	2	4.1%
Merced	2	4.1%
Modoc	2	4.1%
Riverside	2	4.1%
Sierra	2	4.1%
Ventura	2	4.1%
Amador	1	2.0%
Butte	1	2.0%
Lassen	1	2.0%
Madera	1	2.0%
San Bernardino	1	2.0%
San Mateo	1	2.0%
Shasta	1	2.0%
Stanislaus	1	2.0%
Tehama	1	2.0%
Tulare	1	2.0%
Other	13	26.5%

Multiple response question with 49 respondents offering 329 responses.

Other responses:

- 9 Bay Area counties.
- All of the SF Bay and 22 Valley counties, Arizona, Hawaii.
- All coastal counties
- Many others.
- Many others in CA and nationally.
- Most of CA.
- Most counties in Central Coast.
- Northern California.
- Several in southern California.
- Sometimes out of state.

COASTAL TRAINING PROGRAM WEB SURVEY: OVERALL SURVEY RESULTS

- The East Bay.
- Throughout California and other states in the West.
- Throughout CA & WA.

46. WHAT TYPE OF WORK IS PERFORMED AT YOUR COMPANY?

RESPONSE	FREQUENCY	PERCENT
Management plans	46	92.0%
Restoration plans	43	86.0%
Restoration oversight	41	82.0%
CEQA	38	76.0%
Restoration implementation	38	76.0%
EIR	37	74.0%
Management implementation	35	70.0%
EIS	34	68.0%
Management oversight	34	68.0%
NEPA	33	66.0%
Scientific research	26	52.0%

Multiple response question with 50 respondents offering 405 responses.

47. THE COASTAL TRAINING PROGRAM’S MISSION IS TO PROVIDE THE BEST AVAILABLE SCIENTIFIC INFORMATION TO THE PEOPLE ENTRUSTED TO PROTECT OUR NATURAL RESOURCES. THAT SAID, WHAT IS THE SINGLE MOST IMPORTANT THING THAT THE COASTAL TRAINING PROGRAM COULD DO TO HELP YOU BETTER PERFORM YOUR WORK?

- Be sure to include operational and cost information on management and implementation practices (which was well done at the last workshop I went to). Provide enough data to back up principles and conclusions.
- Continue field oriented workshops, nothing is better than being in the field at the appropriate season with local experts.
- Continue to spearhead information transfer to consultants without advanced graduate training; continue to spearhead information transfer to agency personnel without advanced graduate training;
- Continue with insightful, well-planned, and pertinent training opportunities.
- Continue workshops on vegetation and wildlife management (both solving problems with problem species and enhancing environment for beneficial and endangered species.
- Define the critical elements of conservation management solutions (in ecology, management, and policy) for the selected issue; then using that format, compile summaries of the information from the best available literature and scientists, pointing out unresolved controversies, unsupported dogma, and research needs.

COASTAL TRAINING PROGRAM WEB SURVEY: OVERALL SURVEY RESULTS

- Disseminate information on aspects of habitat restoration and protection. Some people in our field are not very willing to share information; we need to change that to move forward. There were a lot of questions in this questionnaire about requirements for training (i.e. To attain a certification). I do most of my learning informally...by talking to people, reading articles, and looking up information on the internet. I think a good biologist finds the information he needs at the moment and formal education helps, but is probably not necessary.
- Educate the regulators regarding complex restoration projects and the collaborative, innovative, and multidisciplinary approaches required for successful habitat restoration and enhancement.
- Follow up monitoring of restoration projects with analysis of success, problems, how to improve...
- Have more workshops. The one unique thing that the ctp does is keep communication lines open between diverse groups who don't ordinarily meet during the normal course of their work.
- Help me stay up on what is out there, in terms of new regulations, science, and applied methods relevant to my field. CTP workshops need not be exhaustive; instead, it is exposure to the breadth of expertises and perspectives combined with the take home (and online) resources for follow up which are key!
- Help with systematic/rare plant ID.
- I'm not sure without knowing the organization better.
- I'm not very familiar with the program, so I would say that I need more information to make that determination.
- Impart the best scientific information to all parties involved so all are on the same page with respect to the best available science being applied to ecological problems rather than based on lack of knowledge or agendas.
- In-field plant identification classes.
- Keep providing current findings for species impacts.
- Keep up the good work!
- Land management for sensitive plant species. Expert training on ecology and population biology of sensitive plants, 'conservation grazing', disturbance ecology, etc.
- Offer workshops on relevant techniques and topics (restoration and conservation issues and techniques).
- Present 'hands on' information for experienced professionals. No general oversight presentations, no theoretical discussions. Practical information from experienced professionals addressing common issues in habitat restoration.
- Presentations from U.S.F.W.S. on federally listed species regarding current standards for mitigation for potential impacts (e.g., what impacts would the U.S.F.W.S. consider important, and what would appropriate mitigation be).

COASTAL TRAINING PROGRAM WEB SURVEY: OVERALL SURVEY RESULTS

- Provide forum for discussion of recent information about species, habitats, regulations, etc. with experts and colleagues.
- Provide information on special-status species use of CTP coverage area.
- Provide the latest updated information on restoration techniques and provide case studies of mitigation projects - what went correctly and what went wrong.
- Provide training based on potential impact analysis and recognition in the field.
- Provide up to date knowledge/empirical data/information on habitat management, restoration, mitigation, species inventory methods, and federal state and local regulations that apply.
- Steady offerings of interesting workshops or symposia.
- The CTP workshops are very valuable to me in presenting information on work being done in natural communities, especially those that are limited and need to be protected or conserved. To improve my work, the CTP could include regulatory updates as part of the workshop (such as, a discussion that includes the regulations that may pertain to the resource being addressed at the workshop).
- Track compliance of mitigation projects and inform regulatory agencies of degree of compliance.
- Train young scientist in the political and economic realities of the development and governmental processes. The political ecology is an essential field of study.
- Training.
- Training in field methodologies, such as habitat delineations (wetlands), special-status plant population monitoring, adequate vegetation monitoring for habitat restoration.
- Unbiased workshops with knowledgeable presenters, talking about practical management solutions.
- Work with the California Coastal Commission to provide their staff some legitimate and focused training opportunities and peer review resources, and to convince them that there is usually a scientific approach to problem solving.

Appendix 2: Selected Cross-tabulation Results

1. PLEASE RATE YOUR PREFERENCE OF DAYS FOR TRAINING WORKSHOPS:

RESPONSE	GOOD (1)	ACCEPTABLE (2)	BAD (3)	BASE	AVERAGE
Monday	20.4%	32.7%	46.9%	49	2.27
Tuesday	37.5%	47.9%	14.6%	48	1.77
Wednesday	45.8%	37.5%	16.7%	48	1.71
Thursday	46.9%	40.8%	12.2%	49	1.65
Friday	30.6%	46.9%	22.4%	49	1.92
Saturday	28.0%	38.0%	34.0%	50	2.06
Sunday	22.4%	18.4%	59.2%	49	2.37

2. PLEASE RATE THE FOLLOWING TIMES OF YEAR FOR YOU TO ATTEND TRAINING WORKSHOPS:

RESPONSE	GOOD (1)	ACCEPTABLE (2)	BAD (3)	BASE	AVERAGE
January	69.4%	26.5%	4.1%	49	1.35
February	60.0%	36.0%	4.0%	50	1.44
March	44.0%	48.0%	8.0%	50	1.64
April	26.5%	59.2%	14.3%	49	1.88
May	30.0%	48.0%	22.0%	50	1.92
June	30.0%	36.0%	34.0%	50	2.04
July	34.7%	38.8%	26.5%	49	1.92
August	39.6%	37.5%	22.9%	48	1.83
September	38.0%	44.0%	18.0%	50	1.80
October	55.1%	28.6%	16.3%	49	1.61
November	51.0%	36.7%	12.2%	49	1.61
December	34.7%	30.6%	34.7%	49	2.00

COASTAL TRAINING PROGRAM WEB SURVEY: SELECTED CROSS-TABULATION RESULTS**5. HOW USEFUL ARE THE FOLLOWING SOURCES OF INFORMATION IN LEARNING ABOUT ENVIRONMENTAL ISSUES?**

RESPONSE	VERY USEFUL (1)	SOMEWHAT USEFUL (2)	NOT AT ALL USEFUL (3)	BASE	AVERAGE
Scientific/Professional conferences	80.4%	19.6%	0.0%	51	1.20
Workshops	78.0%	20.0%	2.0%	50	1.24
Web	74.5%	23.5%	2.0%	51	1.28
Colleagues at work	72.0%	24.0%	4.0%	50	1.32
Peer-reviewed papers	66.0%	34.0%	0.0%	50	1.34
Books	58.0%	38.0%	4.0%	50	1.46
Regulatory agency biologists	51.0%	47.1%	2.0%	51	1.51
California Natural Diversity Database	49.0%	44.9%	6.1%	49	1.57
Environmental review documents	48.0%	50.0%	2.0%	50	1.54
University researchers	43.1%	52.9%	3.9%	51	1.61
Continuing education classes	40.0%	52.0%	8.0%	50	1.68
Unpublished reports	39.2%	56.9%	3.9%	51	1.65
Colleagues at other companies	38.0%	56.0%	6.0%	50	1.68
Government publications	32.0%	62.0%	6.0%	50	1.74
Planning conferences	25.5%	66.7%	7.8%	51	1.82
NGO publications or events	24.5%	67.3%	8.2%	49	1.84
Museums/natural area visitor centers	18.0%	60.0%	22.0%	50	2.04
Brochures/Fliers	16.0%	66.0%	18.0%	50	2.02
Radio	7.8%	49.0%	43.1%	51	2.35
Television	4.0%	44.0%	52.0%	50	2.48

9. WHICH OF THE FOLLOWING MATERIALS WOULD YOU FIND USEFUL AS PART OF A TRAINING WORKSHOP?

RESPONSE	VERY USEFUL (1)	SOMEWHAT USEFUL (2)	NOT AT ALL USEFUL (3)	BASE	AVERAGE
Copies of peer-reviewed published papers on the workshop issue	86.0%	12.0%	2.0%	50	1.16
A summary bibliography on the workshop issue	70.6%	27.5%	2.0%	51	1.32
Written abstracts of presentations	66.7%	31.4%	2.0%	51	1.36
Contact information for the attendees	62.7%	37.3%	0.0%	51	1.37
CD of slides/PowerPoint presentations	44.0%	44.0%	12.0%	50	1.68
Printouts of slides/PowerPoint presentations	39.2%	58.8%	2.0%	51	1.63
Web-streamed video of the workshop	14.0%	32.0%	54.0%	50	2.40
DVD (video) of the workshop	10.4%	47.9%	41.7%	48	2.31
VHS video of the workshop	2.0%	32.7%	65.3%	49	2.63

COASTAL TRAINING PROGRAM WEB SURVEY: SELECTED CROSS-TABULATION RESULTS**10. HOW VALUABLE ARE THE FOLLOWING GROUPS AS POTENTIAL WORKSHOP PRESENTERS?**

RESPONSE	VERY VALUABLE (1)	SOMEWHAT VALUABLE (2)	NOT AT ALL VALUABLE (3)	BASE	AVERAGE
Independent biologists	76.5%	23.5%	0.0%	51	1.24
Federal regulatory agency personnel	66.7%	33.3%	0.0%	51	1.33
State regulatory agency personnel	66.7%	33.3%	0.0%	51	1.33
State lands managers	64.0%	36.0%	0.0%	50	1.36
Federal lands managers	62.7%	37.3%	0.0%	51	1.37
NGO lands managers	54.9%	45.1%	0.0%	51	1.45
Local regulatory personnel	54.9%	43.1%	2.0%	51	1.47
Tenured university faculty	52.9%	43.1%	3.9%	51	1.51
Graduate students	41.2%	56.9%	2.0%	51	1.61

11. WITH WHAT OTHER GROUPS WOULD IT BE IMPORTANT FOR YOU TO INTERACT DURING WORKSHOPS FEATURING ECOLOGICAL/RESOURCE CONSERVATION INFORMATION?

RESPONSE	VERY VALUABLE (1)	SOMEWHAT VALUABLE (2)	NOT AT ALL VALUABLE (3)	BASE	AVERAGE
Regulatory agency personnel	72.5%	27.5%	0.0%	51	1.28
People in similar positions to yourself at other agencies	66.0%	34.0%	0.0%	50	1.34
Farmers (or groups representing them)	43.1%	45.1%	11.8%	51	1.69
Non-governmental environmental organizations	36.0%	62.0%	2.0%	50	1.66
Farm advisors with state or federal agencies	35.3%	45.1%	19.6%	51	1.84
Fishermen (or groups representing them)	27.5%	41.2%	31.4%	51	2.04
Business owners (or groups representing them)	27.1%	54.2%	18.8%	48	1.92
People within your agency	22.2%	66.7%	11.1%	45	1.89
Politicians and their staff	19.6%	56.9%	23.5%	51	2.04

COASTAL TRAINING PROGRAM WEB SURVEY: SELECTED CROSS-TABULATION RESULTS**14. DO ANY OF THE FOLLOWING INHIBIT YOUR ATTENDANCE AT TRAINING WORKSHOPS?**

RESPONSE	MAJOR PROBLEM (1)	SOMEWHAT OF A PROBLEM (2)	NOT A PROBLEM (3)	BASE	AVERAGE
Workload	62.0%	32.0%	6.0%	50	1.44
Schedule of training (length or time offered)	27.5%	51.0%	21.6%	51	1.94
Lack of relevant educational program subjects	18.0%	52.0%	30.0%	50	2.12
Location of training	13.7%	51.0%	35.3%	51	2.22
Family obligations	7.8%	43.1%	49.0%	51	2.41
Supervisor denies permission	5.9%	11.8%	82.4%	51	2.77
Financial costs of attending training	0.0%	51.0%	49.0%	51	2.49

15. DO ANY OF THE FOLLOWING INHIBIT YOUR ATTENDANCE AT TRAINING WORKSHOPS?

RESPONSE	ALL OF THE TIME (1)	FREQUENTLY (2)	SOME OF THE TIME (3)	INFREQUENTLY (4)	NEVER (5)	BASE	AVERAGE
Budget did not allow for extra scientific research	7.8%	41.2%	37.3%	9.8%	3.9%	51	2.61
Budget did not allow for extra field time	2.0%	33.3%	47.1%	15.7%	2.0%	51	2.83
The laws do not support implementation of latest science	3.9%	27.5%	27.5%	35.3%	5.9%	51	3.12
Lack of understanding by clients	4.0%	26.0%	42.0%	22.0%	6.0%	50	3.00
Budget did not allow for sufficient analysis time	0.0%	23.5%	54.9%	17.6%	3.9%	51	3.02
Lack of understanding by regulators overseeing project	2.0%	21.6%	43.1%	27.5%	5.9%	51	3.14
Lack of understanding by senior colleagues	0.0%	9.8%	19.6%	45.1%	25.5%	51	3.86
Information and conclusions presented were not clear enough to implement	0.0%	9.8%	33.3%	43.1%	13.7%	51	3.60
Lack of societal support for environmental regulation	0.0%	7.8%	39.2%	35.3%	17.6%	51	3.62

COASTAL TRAINING PROGRAM WEB SURVEY: SELECTED CROSS-TABULATION RESULTS**19. HOW KNOWLEDGEABLE ARE YOU ABOUT:**

RESPONSE	VERY KNOWLEDGEABLE (1)	SOMEWHAT KNOWLEDGEABLE (2)	NOT AT ALL KNOWLEDGEABLE (3)	BASE	AVERAGE
Ecology of sensitive plants	34.0%	66.0%	0.0%	47	1.66
Level of rarity of sensitive plants	34.0%	61.7%	4.3%	47	1.70
Distribution of sensitive plants	31.9%	61.7%	6.4%	47	1.75
Restoration of sensitive plants (and factors that would influence restoration)	21.3%	76.6%	2.1%	47	1.81

29. PLEASE RATE YOUR INTEREST IN RECEIVING TRAINING IN THE FOLLOWING SUBJECTS

RESPONSE	VERY INTERESTED (1)	SOMEWHAT INTERESTED (2)	NOT AT ALL INTERESTED (3)	BASE	AVERAGE
Habitat management	92.2%	7.8%	0.0%	51	1.08
Habitat restoration	90.2%	9.8%	0.0%	51	1.10
Species restoration	86.3%	13.7%	0.0%	51	1.14
Invasive species control	76.0%	24.0%	0.0%	50	1.24
Ecological buffer design	76.0%	22.0%	2.0%	50	1.26
Endangered species status and recovery	74.5%	23.5%	2.0%	51	1.28
Invasive species impacts	64.0%	34.0%	2.0%	50	1.38
Conservation of organisms	62.7%	37.3%	0.0%	51	1.37
Plant habitat mapping	55.1%	36.7%	8.2%	49	1.53
Wildlife habitat mapping	50.0%	36.0%	14.0%	50	1.64
Biology of organisms	49.0%	43.1%	7.8%	51	1.59
Recreation planning for natural areas	16.7%	62.5%	20.8%	48	2.04
Polluted runoff	12.0%	62.0%	26.0%	50	2.14

COASTAL TRAINING PROGRAM WEB SURVEY: SELECTED CROSS-TABULATION RESULTS

32. HOW INTERESTED WOULD YOU BE IN PARTICIPATING IN THE FOLLOWING ACTIVITIES AFTER ATTENDING A COASTAL TRAINING PROGRAM WORKSHOP?

RESPONSE	VERY INTERESTED (1)	SOMEWHAT INTERESTED (2)	NOT AT ALL INTERESTED (3)	BASE	AVERAGE
Review a certification program for agency-approved biologists, which would certify someone as a high-quality biologist who participates in continuing education designed to familiarize them with the science and practice of natural resource conservation in coastal California	45.1%	41.2%	13.7%	51	1.69
Present work at a training workshop for peers	32.0%	58.0%	10.0%	50	1.78
Present work at a training workshop for regulators	28.0%	60.0%	12.0%	50	1.84
Peer-review others' work	26.0%	60.0%	14.0%	50	1.88

QUESTION 17 BY 33 BY 35:

17. APPROXIMATELY HOW MANY SENSITIVE PLANTS (COVERED BY CEQA) CAN YOU COMFORTABLY IDENTIFY IN THE FIELD? (NUMERICAL SCALE)

33. WHAT WAS THE HIGHEST LEVEL OF EDUCATION THAT YOU RECEIVED AT SCHOOL? (CHECK THE HIGHEST LEVEL ACHIEVED) (ORDINAL SCALE)

DEGREE	NUMBER
Undergraduate (BA/BS)	10
Masters	16
Ph.D.	8

35. SINCE RECEIVING YOUR EDUCATIONAL DEGREE, HAVE YOU TAKEN ANY ADDITIONAL CLASSES THAT ARE RELEVANT TO YOUR TRADE?

RESPONSE	NUMBER
Yes	28
No	6

Combining these questions produces these results:

		33. What was the highest level of education that you received at school?			35. Since receiving your educational degree, have you taken any additional classes that are relevant to your trade?	
		UNDERGRADUATE (BA/BS)	MASTERS	PH.D.	YES	NO
17. Approximately how many sensitive plants (covered by CEQA) can you comfortably identify in the field?	Mean	34.0	22.9	59.5	34.04	38.33
	Cases	10	16	8	28	6
	Std. Deviation	32.30	37.04	71.40	43.08	67.23
	Std. Error	10.21	9.26	25.24	8.14	27.45
95% Confidence Interval for Mean	Lower Bound	10.89	3.20	-0.19	17.33	-32.22
	Upper Bound	57.11	42.67	119.19	50.74	108.88

Using analysis of variance (ANOVA), no statistical differences were found.

QUESTION 15 BY 44

QUESTION 15. DO ANY OF THE FOLLOWING INHIBIT YOUR ATTENDANCE AT TRAINING WORKSHOPS?

This question has 9 response options.

QUESTION 44. HOW MANY EMPLOYEES ARE IN YOUR COMPANY?

In order to make the analysis meaningful, we categorized the questions and used the average for the 9 items.

The result is in the following table:

15. Do any of the following inhibit your attendance at training workshops		44. How many employees are in your company?		
		0 - 10 EMPLOYEES	11 - 50 EMPLOYEES	MORE THAN 50 EMPLOYEES
Budget did not allow for sufficient analysis time	Mean	2.89	2.94	3.25
	Cases	19	16	12
Budget did not allow for extra field time	Mean	2.63	2.88	2.92
	Cases	19	16	12
Budget did not allow for extra scientific research	Mean	2.42	2.94	2.67
	Cases	19	16	12
Lack of understanding by senior colleagues	Mean	3.63	4.00	4.00
	Cases	19	16	12
Lack of understanding by clients	Mean	2.84	3.00	3.55
	Cases	19	16	11
Lack of understanding by regulators overseeing project	Mean	3.26	3.00	3.17
	Cases	19	16	12
The laws do not support implementation of latest science	Mean	2.89	3.38	3.17
	Cases	19	16	12
Lack of societal support for environmental regulation	Mean	3.42	3.75	3.92
	Cases	19	16	12
Information and conclusions presented were not clear enough to implement	Mean	3.53	3.63	3.58
	Cases	19	16	12

Using analysis of variance (ANOVA), no statistical differences were found.

QUESTION 24 BY 25

24. WHICH OF THE FOLLOWING NAMING METHODOLOGIES DO YOU USE TO LABEL PLANT COMMUNITIES? (CHECK ALL THAT APPLY)

25. WHAT SURVEY METHODOLOGY DO YOU MOST COMMONLY USE TO MAP VEGETATION/PLANT COMMUNITIES?

In this particular case, it is possible to do a cross-tabulation between these two questions. However, because one of the questions is a multiple response question, we cannot perform statistical analysis.

25. What survey methodology do you most commonly use to map vegetation/plant communities?	24. Which of the following naming methodologies do you use to label plant communities?			
	HOLLAND	CDFG	SAWYER AND KEELER-WOLF	OTHER
I am familiar with the composition of plant communities and map what I see on the ground	33.3%	31.0%	34.1%	16.7%
I use aerial photos to map patterns I have surveyed on the ground	44.4%	37.9%	39.0%	50.0%
I take transect-based vegetation cover data	8.3%	10.3%	4.9%	8.3%
I use a relevé technique	5.6%	6.9%	7.3%	8.3%
Other	8.3%	13.8%	14.6%	16.7%
Total Cases	36	29	41	12

QUESTION 40 BY 41

40. IN YOUR OPINION, HOW RAPIDLY DOES RELEVANT AND APPLICABLE NEW INFORMATION DEVELOP IN YOUR FIELD? (CATEGORICAL DATA)

41. WHAT YEAR DID YOU BEGIN CONSULTING? (DATES RECODED INTO MEANINGFUL CATEGORIES)

Both questions were recoded into dichotomized variables, helping us to aggregate data to make a meaningful cross-tabulation analysis.

There were two ways to do the cross-tabulations (q41 by q40 or q40 by q41), so we did the cross-tabulation both ways:

		40. In your opinion, how rapidly does relevant and applicable new information develop in your field?	
		LESS THAN A YEAR	MORE THAN A YEAR
41. What year did you begin consulting?	1970-1989	30.8%	36.4%
	1990 - 1999	42.3%	36.4%
	2000 - 2005	26.9%	27.3%
	Total	100%	100%
	Base	26	22

		41. What year did you begin consulting?		
		1970-1989	1990 - 1999	2000 - 2005
40. In your opinion, how rapidly does relevant and applicable new information develop in your field?	Less than a year	50.0%	57.9%	53.8%
	More than a year	50.0%	42.1%	46.2%
	Total	100%	100%	100%
	Base	16	19	13

Using proportions, there were not statistical differences.

QUESTION 45 BY 17

45. WHICH OF THE FOLLOWING COUNTIES DO YOU WORK IN? (CHECK ALL THAT APPLY) (MULTIPLE RESPONSE)

17. APPROXIMATELY HOW MANY SENSITIVE PLANTS (COVERED BY CEQA) CAN YOU COMFORTABLY IDENTIFY IN THE FIELD? (NUMERICAL DATA)

Question 45 originally allowed respondents to choose counties by name. A new numeric variable was developed to obtain the number of counties in which respondents reported working.

Combining these two numerical variables, we used Pearson Correlation:

	17. Approximately how many sensitive plants (covered by CEQA) can you comfortably identify in the field?	
Q45.N Number of counties in which you work	Pearson Correlation	0.03
	Sig. (2-tailed)	0.872
	N	32

There is no correlation between the number of counties in which someone works and the number of sensitive plants they can identify.

COASTAL TRAINING PROGRAM WEB SURVEY: SELECTED CROSS-TABULATION RESULTS

QUESTION 42 BY 33A BY 43 BY 44

42. WHAT IS YOUR ANNUAL SALARY? (CATEGORICAL DATA)

33A. YEAR OF GRADUATION: (DATE)

43. WHAT YEAR WAS YOUR COMPANY FOUNDED? (DATE)

44. HOW MANY EMPLOYEES ARE IN YOUR COMPANY? (NUMERICAL DATA)

Using only three levels, or categories, of annual salary data, the descriptive results are:

DESCRIPTIVES		N	MEAN	STD. DEVIATION	STD. ERROR	95% CONFIDENCE INTERVAL FOR MEAN	
						LOWER BOUND	UPPER BOUND
33a. Year of graduation:	Less than \$54,999	13	1997.62	6.51	1.81	1993.68	2001.55
	\$55,000-\$74,999	16	1992.38	8.90	2.23	1987.63	1997.12
	More than \$75,000	17	1984.71	10.32	2.50	1979.40	1990.01
43. What year was your company founded?	Less than \$54,999	13	1987.31	12.30	3.41	1979.88	1994.74
	\$55,000-\$74,999	14	1981.07	11.11	2.97	1974.66	1987.49
	More than \$75,000	16	1982.25	10.49	2.62	1976.66	1987.84
44. How many employees are in your company?	Less than \$54,999	14	2911.14	10675.44	2853.13	-3252.67	9074.96
	\$55,000-\$74,999	14	3053.21	11210.04	2996.01	-3419.27	9525.70
	More than \$75,000	17	2332.82	9283.56	2251.60	-2440.34	7105.99

Continued on next page.

COASTAL TRAINING PROGRAM WEB SURVEY: SELECTED CROSS-TABULATION RESULTS

The ANOVA analysis shows that there are statistical differences only with question 33a.

ANOVA		SUM OF SQUARES	DF	MEAN SQUARE	F	SIG.
33a. Year of graduation:	Between Groups	1272.622	2	636.311	8.047	0.001
	Within Groups	3400.356	43	79.078		
	Total	4672.978	45			
43. What year was your company founded?	Between Groups	295.581	2	147.791	1.166	0.322
	Within Groups	5070.698	40	126.767		
	Total	5366.279	42			
44. How many employees are in your company?	Between Groups	4601537	2	2300768.33	0.022	0.979
	Within Groups	4.49E+09	42	107003372		
	Total	4.5E+09	44			

Using Duncan Analysis to identify the differences:

		DUNCAN ANALYSIS	
33a. Year of graduation:		Subset for alpha = .05	
42. What is your annual salary?	N	1	2
More than \$75,000	17	1984.71	
\$55,000-\$74,999	16		1992.38
Less than \$54,999	13		1997.62
Sig.		1	0.112
Means for groups in homogeneous subsets are displayed.			
a. Uses Harmonic Mean Sample Size = 15.133.			

We can say that the people who graduated an average of 21 years ago have an annual salary of more than \$75,000, compared with people who graduated an average of 13 years ago who make less than \$75,000 annually.