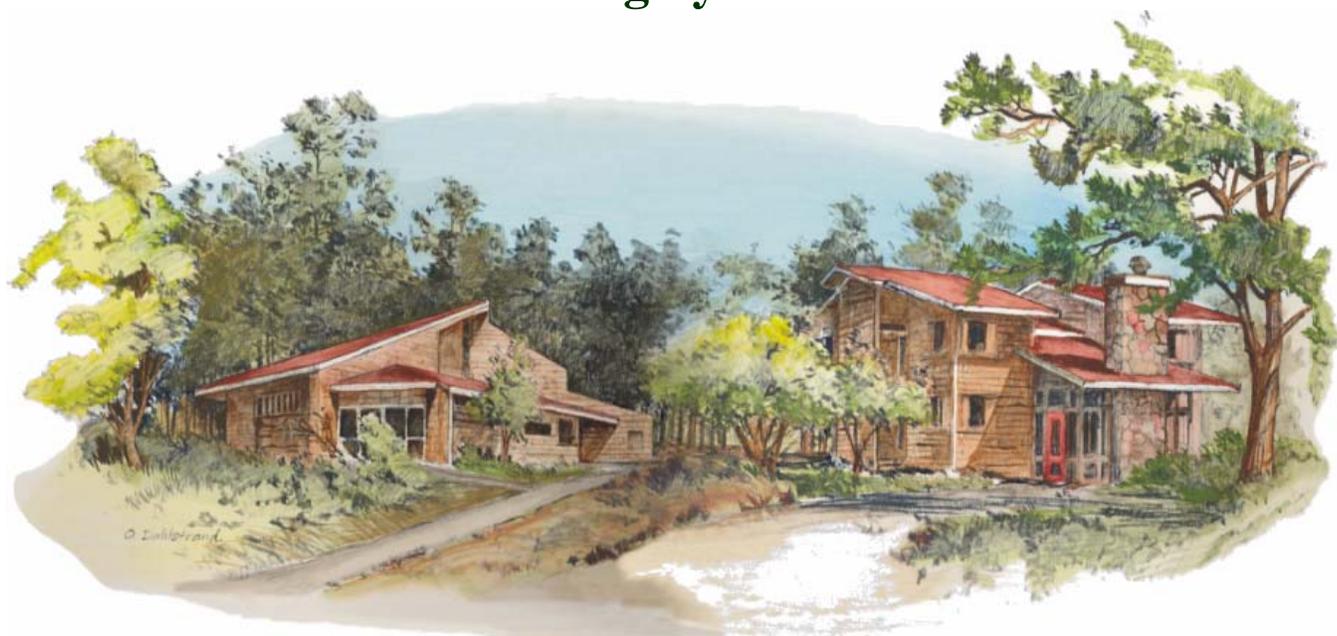


State of California . The Resources Agency . Department of Parks and Recreation

ADVANCED PLUMBING SKILLS

February 4-9, 2007

Training Syllabus



William Penn Mott Jr. Training Center



Memorandum

Date: January 23, 2007
To: Supervisor
From: **Department of Parks and Recreation**
William Penn Mott Jr. Training Center
Subject: Employee Attendance at Formal Training
Advanced Plumbing Skills Group 10

An employee from your office will soon be attending the formal training program described in the attached. Please insure that the employee is fully prepared to attend the session and that the groundwork is laid for the employee's implementation of the training upon returning to work.

You can assist with capturing the full value of the training by taking the following steps:

Prior to Training

1. Make sure that specific employee needs are identified and, if necessary, called immediately to the attention of the Training Coordinator.
2. Review with the employee the reason for the employee's attendance.
3. Review objectives and agenda with the employee.
4. Discuss objectives and performance expected after the training.

Immediately Following Attendance

1. Discuss what was learned and intended uses of the training.
2. Review the employee's assessment of the training program for its impact at the workplace and review the due date of the Post-Training Evaluation form.
3. Support the employee's use of the training at the work place.

Prior to Three Months Following Training

1. Employee, after discussion with supervisor, must login to the Employee Training Management System (ETMS) to complete the Post-Training Evaluation form.
2. Supervisor evaluates the effectiveness of the training on the employee's job performance and logs in to the ETMS to complete the Training Effectiveness Assessment form.

Thank you for your assistance in seeing that the full benefit of training is realized.



Michael D. Green
Acting Department Training Officer

Attachment

cc: Participant

TABLE OF CONTENTS

Formal Training Guidelines	1
Program Attendance Checklist.....	6
Post-Training Assignment	7
Agenda.....	8
Program Outline	10
Program Objectives.....	11
Location Map.....	14

*Mission Statement
Training Office*

*The mission of the Training Office is to improve
organizational and individual performance through
consulting, collaboration, training and development.*

MOTT TRAINING CENTER STAFF

Michael Green..... Acting Department Training Officer
Joanne Danielson Training Specialist
Chuck Combs..... Training Specialist
Dave Galanti Training Specialist
Sara Skinner Training Specialist
Michelle Gardner..... Cadet Training Officer
Connie Breakfield..... Cadet Training Officer
Pat Bost Assistant Program Coordinator
Pamela Yaeger Assistant Program Coordinator
Bill Spencer Assistant Program Coordinator
Edith Alhambra..... Assistant Program Coordinator
Summer Kincaid..... Assistant Program Coordinator
Brian Petersen Program Assistant

THE MISSION

of the California Department of Parks and Recreation is to provide for the health, inspiration and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high quality outdoor recreation.



FORMAL TRAINING GUIDELINES

Welcome to formal training, an essential component in your career development.

Since 1969, our Department has been providing a continuously changing number of diverse training programs at its main training facility, the William Penn Mott Jr. Training Center, and other locations including Marconi Conference Center and, most recently, the Two Rivers Training Facility in Sacramento. The Department strives to enhance your learning and job performance with formal training of the highest quality.

Our Department's dedication to training is only one aspect of its commitment to you and to the public. This commitment is costly and represents an important investment in you and your career. You and the Department realize a return on that investment by your positive participation in formal training itself and post training follow-through.

The program you will be participating in is described in this training syllabus, which outlines what you can expect from this training and what is expected of you. This syllabus details what you should do before you leave for training; what to do when you arrive; what you will be doing while in training; and, importantly, what you should be able to do when you return to your work site. Specifically:

1. **SYLLABUS:** The syllabus is now accessible on the Employee Training Management System (ETMS). You should print a copy of the syllabus to bring with you to class. Your copy of this syllabus is an important part of your training experience and should be brought with you to training. Read it before you arrive and review it following the program along with material you received at training.
2. **PRE-TRAINING ASSIGNMENTS:** Your completion of pre-training assignments is essential to the success of your training. You are responsible for all reading assignments in preparation for classroom sessions. Time will be provided during working hours to accomplish any assignments, which involve either individual or group efforts and resources. (Pre-training assignments are listed in the "Training Attendance Requirements" section.)

3. TRAVEL: Arrange your travel to and from the training through your District or Office. (No reimbursement for travel expense - including per diem costs - will be approved for travel not specifically authorized in advance by the District Superintendent.) Individuals may claim reimbursement for incidental expenses incurred as outlined in DAM 0410.6. The Training Center does not have the capability to provide transportation to/from Monterey Airport.
4. HOUSING: Housing will be assigned to you on a shared-room basis and will be available from 3:00 p.m. on the date of arrival to 12:00 noon on the date of departure. The Department provides your room and board expenses at the Training Center only. No per diem allowance will be authorized for living off-grounds. This does not preclude living off-grounds at your own expense. Please advise the Department Training Officer no later than one week before your scheduled arrival if you plan to live off-grounds. No animals are permitted in Asilomar housing. In the event of an emergency, staff must know your room assignment; therefore, you may not switch rooms without staff approval. Overnight guests are not allowed in the buildings unless registered beforehand at the front desk in Asilomar's Administration Building. Quiet hour for lodge living areas is 10:00 p.m.

HOUSING CANCELLATION POLICY: If you do not need lodging or must change or cancel your reservation, you must contact the Training Center at least 72 hours prior to your date of arrival. The Training Center is committed to ensuring that the reservation that has been made for you is accurate and needed.

5. MEALS: Meals will be provided, semi-cafeteria style, from dinner on the date of arrival through lunch on the date of departure. Meals will be served at 7:15 a.m. for breakfast, 12:00 noon for lunch, and 6:00 p.m. for dinner. Hot or box lunches may be provided on some days. If you require a special diet, notify the Asilomar Chef at 831-372-8016 no later than one week before your scheduled arrival.

In order to assist participants with limited mobility, Asilomar provides a shuttle to and from the dining hall. Please contact either Asilomar staff upon check in, or Training Center staff upon your arrival, for instructions on arranging a transport.

6. OFF-GROUNDS ACCOMMODATIONS: When authorized to stay off-grounds by the Department Training Officer, the Training Center will pickup the cost of your room and meals at the current DPR Asilomar rate. If you stay off grounds and have meals on grounds, the Training Center will authorize only what the Department pays Asilomar for lodging.

7. CLOTHING: Field uniforms as found in "Description of Required Field Uniforms", DOM Chapter 2300, Uniform Handbooks, not including optional items, will be worn daily by all uniformed employees during formal training sessions **unless otherwise specified in the Program Attendance Checklist**. Non-uniformed employees shall wear professional business attire.

Because we are on the conference grounds with many other groups, and the image we project as State Park employees is important not only during working hours but off duty hours as well, your informal sportswear should be appropriate.

8. ROOM SAFES: Two safes have been installed in each of the lodge rooms used by the Training Center (Live Oak, Tree Tops, and Deer Lodge). These safes are a type that allows the user to input their own combination of numbers to facilitate opening and closing. The Training Center has a master key for emergency entry. Safes are to be left in the open position when checking out of your room.
9. WEAPONS: Weapons are permitted in rooms under the following conditions. Authorized firearms and magazines stored while at the Training Center shall be in a safe condition and stored in one of the following locations: your room safe in Live Oak, Tree Tops, or Deer Lodge, one of the Training Center's safes in the Whitehead Room or secured in your vehicle.
10. ALCOHOLIC BEVERAGES: Participants shall not possess or consume alcoholic beverages in common areas (living room) while on the Asilomar Conference Grounds unless provided and hosted by Concessionaire Delaware North.
11. SMOKING: Smoking is not permitted in the Training Center or in any lodge or guest room on the Asilomar Conference Grounds.
12. TRAINING CENTER: The Training Center is located on Asilomar Conference Grounds, part of Asilomar State Beach. The Conference Grounds are operated for our Department by a concessionaire, and all lodging and food services are provided to us by employees of the concessionaire. Constant efforts are made to maintain a sound, harmonious working relationship between the Department and concessionaire. None of us can expect preferential treatment for any reason and, as a departmental employee, you will be expected to join in our continuing effort toward an effective relationship with each Asilomar concession staff member. On occasion, non-departmental groups may be staying in the same lodges. It is imperative that you represent the Department well on and off duty.
13. REGISTRATION: When you arrive at Asilomar Conference Grounds, go directly to the front desk at the Asilomar Administration Building for your room key and dining room ticket. If you require vegetarian meals, notify the front desk representative and your meal ticket will be marked accordingly.

14. **COURSE LEADERS:** The formal training you will attend is developed and, for the most part, conducted by experienced State Park employees in field and staff positions. Some courses will be conducted by qualified instructors from other agencies and educational institutions. Your course leaders have proven their ability and knowledge in their profession, and provide a level of expertise difficult to match.
15. **TRAINING CENTER STAFF:** A Training Center staff member has been assigned responsibility for your training group as well as for your training program. That staff member usually serves as a Course Leader as well as a Coordinator. During the program, you may be asked to assist Training Center staff in the logistics of your training program (organizing field trip transportation, supervising classroom breaks, etc.). Center staff will do all within their power to make your training experience pleasant and meaningful.
16. **TRAINING MATERIALS:** May be made available to you at both your unit and the Training Center. Handout materials issued at your unit should be brought to training for possible use. A conference binder or notebook will be issued to you at the training session for note taking and convenience in handling materials. Copies of DAM and DOM will be available to you for self-study. Bring your own pens and pencils.
17. **ATTENDANCE:** Regular attendance is a critical course requirement and your participation is important to the success of this training. All absences, except those of an emergency nature, must be approved in advance by the Training Specialist.
18. **COLLEGE CREDIT:** Most training programs are accredited by Monterey Peninsula College for lower division credit. If you successfully complete an accredited program, you will receive either a letter grade or a credit/no-credit designation.
19. **VEHICLES:** All vehicles should be parked in the lots adjacent to the Training Center. Any questions regarding use of a State vehicle while at the Training Center should be discussed with your supervisor prior to your departure for training, or with your Program Coordinator while at the Training Center.
20. **BICYCLES:** If you bring your bicycle, store it in the bicycle shed next to the Training Center. Bicycles may not be brought into any building nor chained to lamp posts, trees, etc. The Training Center has a limited number of bicycles available for your use. Prior to your use, you are required to complete a safety inspection and sign a waiver, which is posted in the bicycle shed.

21. MAIL: Mail forwarded to you during your time at the Center should be addressed to you in care of:
Department of Parks and Recreation
WILLIAM PENN MOTT JR. TRAINING CENTER
P. O. Box 699, Pacific Grove, CA 93950
22. CELL PHONES: As a courtesy to your fellow participants and course leaders ensure that your cell phone is turned off during classes. Participants should not be receiving or making cell phone calls during class time. Please limit those calls to your breaks.
23. FAX: The Training Center's FAX number is (831) 649-2824.
24. TELEPHONE: Limit phone calls during classroom hours to urgent business or emergencies. Anyone wishing to contact you by telephone during working hours should call the Center at (831) 649-2954. Calls after 5:00 p.m. or during weekends should be made to (831) 372-8016, Asilomar Conference Grounds, and the caller should tell the switchboard operator you are with a Department of Parks and Recreations training group.
25. LAUNDRY AND DRY CLEANING: May be taken care of by you at one of several local establishments. An iron is available for 24-hour checkout from the Training Center front desk.
26. RECREATION: Facilities available on grounds include a heated swimming pool, ping-pong and pool tables, and a volleyball court. The Monterey area offers horseback riding, golf, tennis, racquetball, deep sea fishing, and many historical landmarks and scenic sights to explore.
27. POST-TRAINING ASSIGNMENTS: In connection with formal training are to be completed under the direction of your supervisor. See "Program Attendance Requirements" in this syllabus.
28. COFFEE BREAK REFRESHMENTS: Will be available throughout each session at the Center. You will be asked to contribute to the "Hospitality Fund" to defray expenses. Please bring your own coffee cup.

PROGRAM ATTENDANCE CHECKLIST

To assist you in your preparation for formal training session at the William Penn Mott Jr. Training Center, the following list is provided:

- _____ 1. Read and understand the Advanced Plumbing Skills Program Syllabus prior to your arrival at the Training Center.

- _____ 2. Review the text and handout materials you received during the Intermediate Plumbing Skills training program.

- _____ 3. Complete the pre-training assignment attached to this syllabus.
 - Discuss the Advanced Plumbing Skills program with your supervisor. What specific changes in your abilities and performance are expected to result from your attending this training? List these expectations along with your own under "Expectations" on the back of the "Pre-training Questionnaire".

 - Discuss the projects you will be assigned in the next twelve months, which will utilize the skills developed during the training program.

- _____ 4. Remember to bring the following with you to training:
 - Program syllabus.

 - Personal safety equipment (eye, ear, head, and hand protection).

 - Coveralls or appropriate work clothing.

 - Proper Field Uniform (See Uniform Handbook).

 - Coffee cup, calculator, pencils, pens, alarm clock.

If you have questions or need help call the Program Coordinator Chuck Combs, at (831) 649-7124. He will be happy to offer suggestions.

POST-TRAINING ASSIGNMENT

Prior to ninety days after the completion of this program, the employee and his/her supervisor should sit down and discuss the impact and assess the effectiveness this program has had on the employee. Then both the supervisor and employee should login to the Employee Training Management System (ETMS) and complete the Post-Training Evaluation form (an email will be sent to both employee and supervisor notifying them that the evaluation needs to be completed). Once you login to the ETMS, you will need to fill out the evaluation form before you will be able to do anything else.

The post-training evaluation process is intended to provide a bridge between classroom instruction and the on-the-job application of training. The information obtained through this process will assist the training participant, supervisor, and Training Center in providing a return on the investment the Department has on training.

ADVANCED PLUMBING SKILLS - GROUP 10 - Agenda - February 4-9, 2007

Lead Instructor: Curt Linse
Assistant Program Coordinator: John Mackey

Special Notice:

This program will be conducted at the Mott Training Center Shop Annex, 2211 Garden Road, Building C, Monterey, California. Vans are available to transport you to and from the Shop Annex and will leave the Mott Training Center promptly at 0800 daily and return by 1700.

Sunday

February 4

1500-	REGISTRATION: Check in at the Asilomar Administration Building.	All
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Monday

February 5

0830-0930	Program Orientation/Expectations/MPC Registration	Combs
0930-1200	Plumbing System Sizing/Safety Review	Mackey
1200-1300	Lunch	
1300-1630	Water System Distribution	Linse

Tuesday

February 6

0830-1000	Joint Restraint Systems	Linse
1000-1200	Pumps, Pump Controls and Pumping	Fluid Res. Mgmt.
1200-1300	Lunch	
1300-1430	Pumps, Pump Controls and Pumping	Fluid Res. Mgmt.
1430-1630	Pump Repair	Fluid Res. Mgmt.

Wednesday

February 7

0830-1000	Preventive Maintenance Program/Distribution	Linse
1000-1200	System Sanitation/Disinfecting	Walker
1200-1300	Lunch	
1300-1630	Gas Valves Trouble Shooting and Repair	Spalletta

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Thursday

February 8

0830-1000	Cal OSHA Laws and Regulations Confined Space/Trenching and Shoring/Confined Space Equipment Awareness	Linse
1000-1200	Fire Hydrant Service/Maintenance	Linse
1200-1300	Lunch	
1300-1630	Waste Water Reclamation Plant Tour	Linse

Friday

February 9

0830-1030	Wastewater System Maintenance	Linse
1030-1130	Exam and Exam Review	Linse
1130-1200	Program Evaluation	Combs
1200-	Lunch and Depart	

TRAINING PROGRAM: ADVANCED PLUMBING SKILLS

36 HOURS

PROGRAM OUTLINE

<u>Course</u>	<u>Hours</u>	<u>Total Hours</u>
<u>ORIENTATION</u>		1.0
Program Overview and MPC Registration.....	1.0.....	
<u>PLUMBING SYSTEMS</u>		11.5
Pipe Sizing	3.0.....	
Codes and Safety Review	1.0.....	
Plumbing Sizing/Review.....	3.5.....	
Gas Valve Maintenance/Repair.....	4.0.....	
<u>WATER SYSTEM DISTRIBUTION</u>		8.0
Preventive Maintenance.....	2.0.....	
Fire Hydrant Service and Maintenance	1.5.....	
Potable Water System Sanitation.....	1.5.....	
Back-Flow Prevention	1.5.....	
Joint Restraint Systems.....	1.5.....	
<u>WASTEWATER COLLECTION SYSTEM MAINTENANCE</u>		3.0
Preventive Maintenance.....	3.0.....	
<u>PUMPS AND PUMPING</u>		7.0
Pump Theory.....	1.5.....	
Split Case Centrifugal Pumps	1.0.....	
Line Shaft Turbine Pumps.....	0.5.....	
Special Pumping Units	0.5.....	
Bearings, Packing, and Seals	0.5.....	
Lubrication.....	0.5.....	
Reading Performance Curves	1.0.....	
Troubleshooting.....	1.5.....	
<u>RELATED TOPICS</u>		5.0
Confined Space Entry Awareness/Shoring	4.0.....	
Examinations.....	1.0.....	
<u>PROGRAM EVALUATION</u>		0.5
	Total Hours	36

ADVANCED PLUMBING SKILLS

PROGRAM ORIENTATION

Purpose: Participants will meet one another, the program coordinator and facilitator. The group will share expectations for the training program. In addition, program content will be reviewed and registration for Monterey Peninsula College completed.

Performance Objectives: By the close of the session the participant will

1. Review program content, procedure, and evaluation processes.
2. Share and record expectations with group members.
3. Complete Monterey Peninsula College registration materials.
4. Adhere to all Formal Training Center Guidelines.

PLUMBING SYSTEMS

Purpose: To review codes and plumbing requirements for residential structures.

Performance Objectives: By the close of the session the participant will

1. Review code requirements for gas, water, and drain/waste plumbing systems.
2. Review pipe-sizing procedures for gas, water, and DWV systems.
3. Demonstrate how to determine normal flow, peak flow, and unusual usage such as fire flows.
4. Identify the most energy efficient water heater features.
5. Identify the system components and gain information on the operation and maintenance of common solar water heating equipment.
6. Review the repair and maintenance of common gas valves used in the industry today including trouble shooting and retrofitting techniques.

WATER DISTRIBUTION SYSTEMS

Purpose: To introduce participants to water distribution systems and system components between water source and point of consumption.

Performance Objectives: By the close of the session the participant will

1. Learn the components of a typical water distribution system and identify the function of each component.
2. Review the cause of water hammer, air lock, and head loss.
3. Review the causes of movement in water distribution lines.
4. Identify the correct positioning of thrust blocks on water lines.
5. Review the codes, laws, and procedures relating to water main sanitation and disinfecting.
6. Calculate the disinfectant dosage for a sample water main.
7. Review the codes, laws, and procedures relating to back-flow prevention.
8. Identify potential sources of cross-connections.
9. Review examples of acceptable back-flow prevention devices.
10. Develop and conduct a water distribution system surveillance program.
11. Review the importance of locating leaks and methods of leak detection.
12. Review the elements of a basic distribution system preventive maintenance program.

PLUMBING AND PIPEFITTING

Purpose: To examine the fittings and plumbing methods used in park water distribution systems.

Performance Objectives: By the close of the session the participant will

1. Review the selection and use of pipe and pipe fittings in sizes larger than 3" diameter.
2. Review installation and maintenance procedures for pipes larger than 3" diameter.

3. Review safety considerations when trenching/shoring.

PUMPS AND PUMPING

Purpose: To develop an understanding of pumps and pumping system maintenance.

Performance Objectives: By the close of the session the participant will

1. Identify the basic components of a pump system.
2. Demonstrate an understanding of hydraulics and pump theory.
3. Review the major types of pumps used in water and waste water systems.
4. Demonstrate an understanding of how different pumps work.
5. Evaluate pump performance using pump specifications and performance curves.
6. Identify the wearing parts of a pump and demonstrate the ability to replace pump seals, packing, and components as required.
7. Demonstrate the ability to identify and correct pump/motor failures.
8. Identify the components of motor controls and telemetry systems.

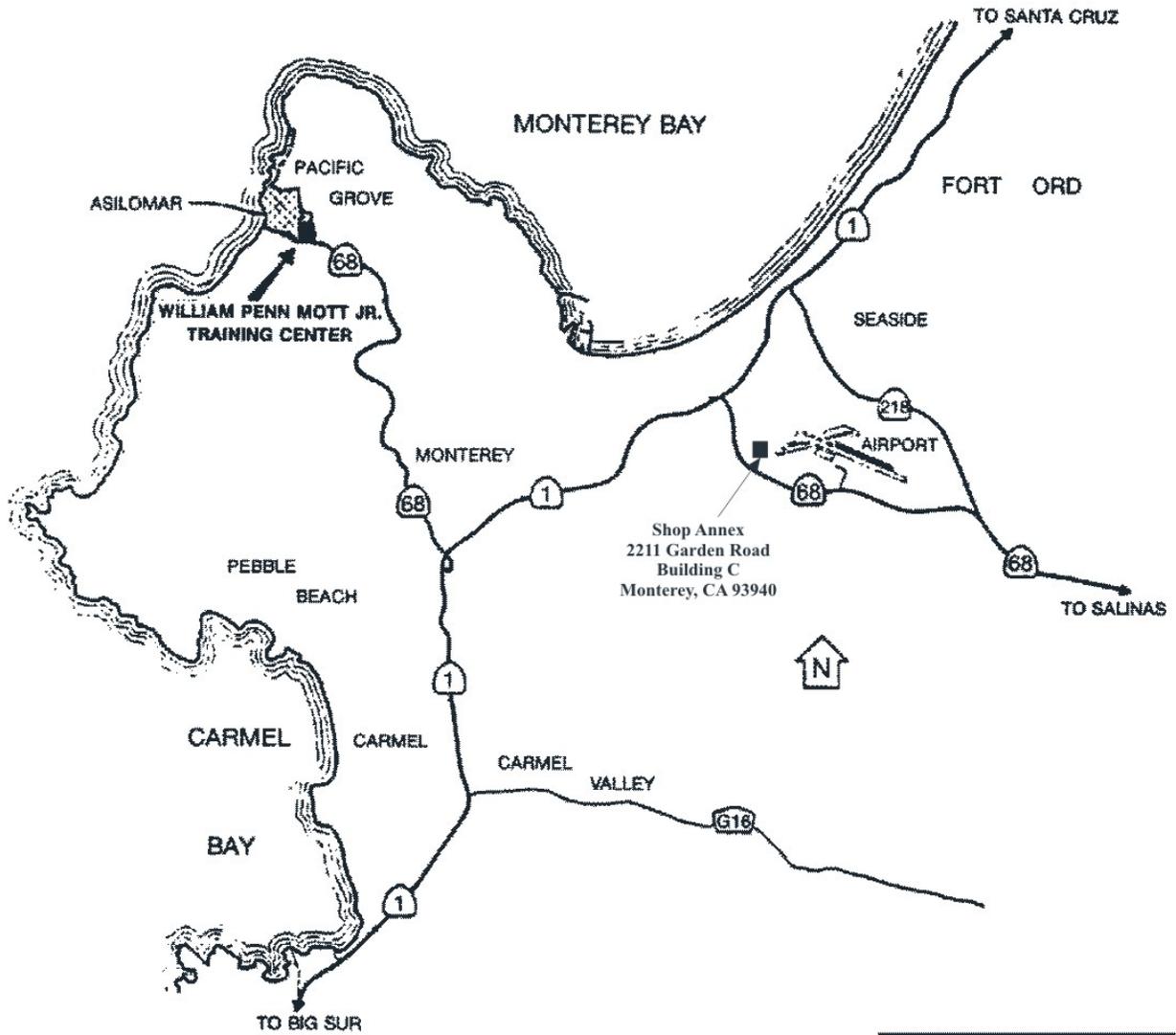
RELATED TOPICS

Purpose: To provide the participant with the legal requirements of working in confined spaces.

Performance Objectives: By the close of the session the participant will

1. Discuss how to work in and around confined spaces including the special requirements of a confined space program.

location map for
WILLIAM PENN MOTT JR. TRAINING CENTER
837 ASILOMAR BLVD.
PACIFIC GROVE, CALIFORNIA 93950



Advanced Plumbing Skills

PRE-TRAINING ASSIGNMENT

Name: _____ District/Unit: _____

The pre-training assignment is a vital component of your training experience. In completing the assignment, you will achieve several important goals. You will involve your supervisor in identifying your training needs and clarifying program expectations. With your supervisor you will identify those projects to which you will be assigned that will utilize the training you are scheduled to attend.

Your pre-training assignment is to complete the following:

- Review the Post-Training evaluation form at the end of the syllabus with your supervisor. Discuss the projects you will be assigned in the next twelve months, which will utilize the skills developed during the training program.
- Discuss the Advanced Plumbing Skills program with your supervisor. What specific changes in your abilities and performance are expected to result from your attending this training? List these expectations along with your own under "Expectations" on the back of the "Pre-training Questionnaire".
- Email to chuck@parks.ca.gov or FAX 831-649-2824 the completed pre-training questionnaire to arrive at the Training Center as soon as possible, but no later than **February 2, 2007.**

Completion of the pre-training assignment and subsequent class presentation will be evaluated and will constitute approximately 20% of your program grade.

ADVANCED PLUMBING SKILLS - EXPECTATIONS

Supervisor

After completing this training program I expect the participant to be able to:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Participant

After completing this training program I need to be able to:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Participant Name & District print): _____

Supervisor (print & sign): _____

ADVANCED PLUMBING SKILLS - QUESTIONNAIRE

	Weak	Good	Very Good	Proficient
Residential Plumbing Systems				
Commercial Plumbing Applications				
Principles of Hydraulics				
Pipe Sizing				
Back-Flow Prevention				
Distribution System - Preventive Maintenance				
Water Distribution System Repair				
System Sanitation and Disinfecting				
Valves - Selection and Maintenance				
Confined Space Entry (Procedures)				
Split Case Centrifugal Pumps				
Line Shaft Turbine Pumps				

Areas of proficiency not listed:

PLEASE ANSWER THE FOLLOWING QUESTIONS ABOUT YOUR COMMERCIAL WATER HEATING SYSTEMS:

1. What types of heaters do you have, and how many of each are you responsible for?

Gas-fired tank type _____

Electric-fired tank type _____

Gas indirect (boiler/tank combination) _____

Electric indirect (boiler/tank combination) _____

Gas instantaneous heater _____

Other (describe type) _____

List the type, make, and model number of typical units:

EXAMPLE gas tank-type, A.O. Smith, BTC-120

How is the hot water being used at your facility?

Showers _____

Laundry _____

Kitchen _____

Other _____

Do any of your heaters have hot water recirculating lines?

Yes _____ No _____

Are there any specific topics or problems you'd like to see covered in the water heating training session?

Thanks for your input.