

INTERAGENCY ECOLOGICAL PROGRAM 2007 ANNUAL WORKSHOP

FEBRUARY 28 - MARCH 2, 2007
ASILOMAR CONFERENCE GROUNDS
PACIFIC GROVE, CA



Interagency
Ecological Program

COOPERATIVE ECOLOGICAL
INVESTIGATIONS SINCE 1970

WORKSHOP AT A GLANCE

All oral sessions will be located in the Chapel. The poster session will be located in the Fred Farr Forum.

WEDNESDAY, FEBRUARY 28

1:00-2:40 General Updates
2:40-3:00 Break
3:00-4:50 IEP and CWEMF Joint Session
4:50-6:00 IEP Registration
6:00-7:00 Dinner
7:00-9:00 Invited Guest Speaker and Social

THURSDAY, MARCH 1

7:30-8:15 Breakfast
8:15 General Announcements
8:15-10:20 Pelagic Organism Decline
10:20-10:40 Break
10:40-12:00 Phytoplankton Conditions and Trends
12:00-1:00 Lunch
1:00-2:00 Size Matters
6:00-7:00 Dinner
7:00-9:00 Poster Session and Social

FRIDAY, MARCH 2

7:30-8:15 Breakfast
8:15 General Announcements
8:15-9:55 Fish Facilities
9:55-10:15 Break
10:15-11:55 Striped Bass and Sturgeon
11:55-12:00 Concluding Remarks
12:00-1:00 Lunch

GENERAL INFORMATION

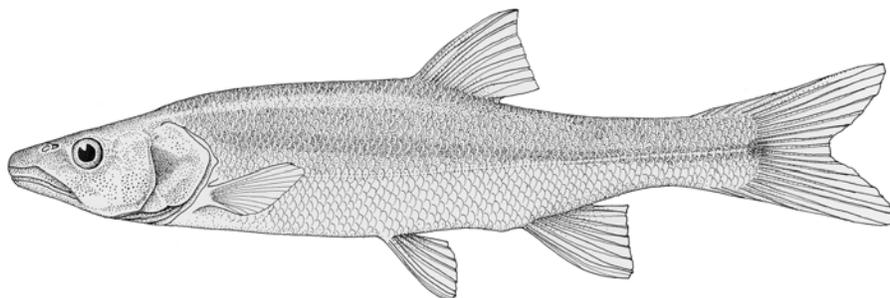
Overview: The Interagency Ecological Program (IEP) for the San Francisco Bay / Sacramento-San Joaquin Delta consists of ten member agencies, three State (Department of Water Resources, Department of Fish and Game, and State Water Resources Control Board), six Federal (Fish and Wildlife Service, Bureau of Reclamation, Geological Survey, Army Corps of Engineers, NOAA Fisheries, and Environmental Protection Agency), and one non-government organization (San Francisco Estuarine Institute). Academic and private scientists are also heavily involved in IEP. Together, this group works to develop a better understanding of the estuary's ecology and the effects of the State Water Project (SWP) and Federal Central Valley Project (CVP) operations on the physical, chemical, and biological conditions of the San Francisco Estuary and Sacramento-San Joaquin Delta.

The annual Workshop serves as a focal point for IEP activities. The program for this year's Workshop is diverse, with many oral and poster presentations offering a full spectrum of current IEP activities. A major focus of this year's Workshop will be on activities associated with the Pelagic Organism Decline.

IEP Program Manager: Chuck Armor (DFG)

IEP Management Team Members: Chuck Armor (DFG), Randy Baxter (DFG), Paul Cadrett (USFWS), Mike Chotkowski (USBR), Marty Gingras (DFG), Jeff McLain (NMFS), Dean Messer (DWR), Ted Sommer (DWR)

2007 Workshop Program Committee: Paul Cadrett (USFWS), Fred Feyrer (DWR), Kelly Souza (DFG), Erwin Van Nieuwenhuysse (USBR), Eric Volkman (USFWS), Shirley Witalis (NMFS)



The 2007 IEP Workshop is dedicated to the memory of Randy Brown



Excerpt from a CALFED News Release dated August 28, 2006: Dr. Randy Brown was a 34-year biologist for the state Department of Water Resources, establishing its Office of Environmental Services in 1992 and serving as its chief until his retirement in 2000. Since then Brown was a science advisor for the CALFED Bay-Delta Program, a collaboration of 25 state and federal agencies to improve water quality, water supply and the environment in the Delta. “As an originator and advisor to the CALFED Science Program, Randy made significant contributions to the Program since its inception,” said Ronald Ott,

Ph.D., CALFED’s Deputy Director for Science. “His enthusiasm, insight, and dedication to improving the understanding and communications of science of the Bay-Delta system to other scientists and decision makers will be truly missed.”

Dr. Brown was hired to join CALFED by the program’s first lead scientist, Sam Luoma. He developed the quarterly online journal *San Francisco Estuary and Watershed Science*, helped plan and implement CALFED’s bi-annual science conferences, formed workshops, provided technical reviews, and wrote white papers. As one of CALFED’s most senior and long-term advisors, Dr. Brown’s work included providing technical support for the innovative Environmental Water Account program, which provides protection to the at-risk fish species of the Bay–Delta estuary through environmentally beneficial changes in water project operations. Dr. Brown was often quoted describing his love of the outdoors and “a chance to combine a vocation with an avocation” as what led him to – and fueled his passion for – his work.

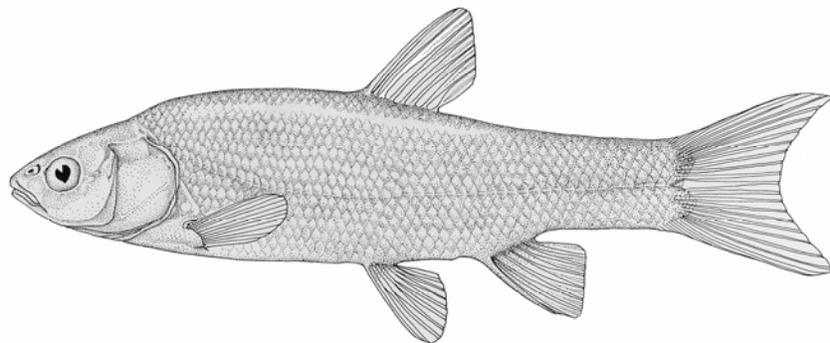
He began his career with DWR in 1966 as a junior aquatic biologist with the San Joaquin District. He was one of the first environmental specialists to join the Department. Initially he studied ways to remove nitrogen from subsurface

agricultural drainage and later became a senior water quality biologist. Eventually he became the chief of Central District's fish facilities section, then the Bay-Delta Ecological Studies Section, and then the Division of Local Assistance's Environmental Studies Branch, before retiring as Chief of the Environmental Services Office.

As Chief of Environmental Services, Dr. Brown played a major role in collecting and analyzing data for investigations on the Bay-Delta estuary, helping the Department comply with an array of environmental laws and regulations that affect State Water Project operations and development programs. In addition, the studies and data were used extensively by the Department, other agencies and consultants, to prepare environmental impact reports, biological assessments, planning reports, and other documents.

During a career of distinction, Dr. Brown served as editor of the *Early Life History of Fishes in the San Francisco Estuary and Watershed*, published by American Fisheries Society in 2004. He also served as co-Editor in Chief of the online journal *San Francisco Estuary and Watershed Science*, the quarterly journal published by the CALFED Bay-Delta Program.

Additionally, he received the UC Davis College of Agriculture's 1998 Award of Distinction for his work as chief biologist with DWR, as well as coordination of the Interagency Ecological Program for the Sacramento-San Joaquin estuary. He was further honored for his 33-year career in public service for carrying out research and implementing fishery habitat restoration, aquatic monitoring and water quality projects and his achievements in getting people to work together towards solutions to Bay-Delta problems.



WEDNESDAY, FEBRUARY 28

GENERAL UPDATES (Moderator: Fred Feyrer, DWR)

- 1:00-1:20** **Interagency Ecological Program**
Chuck Armor, DFG
- 1:20-1:40** **California Water and Environmental Modeling Forum**
KT Shum, EBMUD/Convener
- 1:40-2:00** **CALFED Science Program**
Michael Healey, CBDA
- 2:00-2:20** **Future of the Delta I**
Jeff Mount, UCD
- 2:20-2:40** **Future of the Delta II**
Jay Lund, UCD
- 2:40-3:00** **Break**

INTERAGENCY ECOLOGICAL PROGRAM AND CALIFORNIA WATER AND ENVIRONMENTAL MODELING FORUM JOINT SESSION (Moderator: Paul Cadrett, USFWS)

- 3:00-3:20** **San Joaquin River Restoration Settlement Agreement**
Russ Bellmer, NOAA Fisheries
- 3:20-3:40** **Habitat Management, Preservation, and Restoration Plan for Suisun Marsh**
Laurie Briden, DFG & Cassandra Enos, DWR
- 3:40-4:00** **Overview of the 2005 LIDAR Elevation Data Acquisition for the Suisun Marsh & Yolo Bypass**
Joel Dudas, DWR
- 4:00-4:20** **Elevation Matters: Wetland Restoration Where It Wants To Be**
Chris Enright, DWR
- 4:20-4:40** **IEP Delta Smelt Programmatic Review**
Gonzalo Castillo, USFWS
- 4:40-4:50** **California's Response to Quagga Mussels**
Dean Messer, DWR

REGISTRATION

4:50-6:00

DINNER

6:00-7:00

INVITED GUEST SPEAKER AND SOCIAL

- 7:00-9:00** **Monterey Bay Aquarium's White Shark Research Program**
John O'Sullivan, MBA Curator of Field Operations

THURSDAY, MARCH 1

BREAKFAST

7:30-8:15

ANNOUNCEMENTS

8:15

PELAGIC ORGANISM DECLINE (Moderator: Mike Chotkowski, USBR)

- 8:15-8:35** **Go Ahead POD, Make My Bay: Trends in POD and Down-Bay Species**
Tom Greiner, DFG
- 8:35-8:55** **Insights into the Population Dynamics of Threadfin Shad in the Delta**
Fred Feyrer, DWR
- 8:55-9:15** **Hungry, Hungry, Hypomesus Starving for a Copepod!**
Diet, Condition and Apparent Growth of Pelagic Fishes in the Upper San Francisco Estuary
John Budrick, DFG
- 9:15-9:35** **POD Conceptual Synthesis**
Bruce Herbold, EPA
- 9:35-10:20** **POD Open Question and Answer Session**
POD Management Team will answer questions from the audience
- 10:20-10:40** **Break**

PHYTOPLANKTON CONDITIONS AND TRENDS (Moderator: Matt Nobriga, CALFED)

- 10:40-11:00** **Phytoplankton in San Francisco Bay**
Jim Cloern, USGS
- 11:00-11:20** **Trends in Delta Phytoplankton Biomass and Related Water Quality Characteristics**
Alan Jassby, UCD
- 11:20-11:40** **Do Low Phytoplankton Growth Rates Signal the "Bad" Habitat Conditions in Suisun Bay Driving the Pelagic Organism Decline?**
Richard Dugdale, SFSU
- 11:40-12:00** **Response of Chlorophyll to Reduced Phosphorus Concentration in the Delta and the Rhine River (Netherlands)**
Erwin Van Nieuwenhuysse, USBR
- 12:00-1:00** **LUNCH**

SIZE MATTERS (Moderator: Lenny Grimaldo, DWR)

- 1:00-1:20** **Ricker Revisited: Effects of Fishing and Females on Recruitment Dynamics of Walleye (*Sander vitreus*)**
Paul Venturelli, University of Toronto
- 1:20-1:40** **Population Resilience and Age Structure in Rockfish**
Steve Berkeley, NMFS
- 1:40-2:00** **Fishing Sans Size-Limit: Interplay Between Size-Selective Larval Entrainment and Juvenile Survival on Delta Smelt**
Bill Bennett, UCD

DINNER

6:00-7:00

POSTER SESSION AND SOCIAL

7:00-9:00 **FRED FARR FORUM**

FRIDAY, MARCH 2

BREAKFAST

7:30-8:15

ANNOUNCEMENTS

8:15

FISH FACILITIES (Moderator: Bob Fujimura, DFG)

- 8:15-8:35 Fish Predation at the Skinner Fish Facility**
Geir Aasen, DFG
- 8:35-8:55 Delta Smelt Stress at the Skinner Fish Facility**
Virginia Afentoulis, DFG
- 8:55-9:15 Can Delta Smelt Survive the Fish Salvage Facilities?**
Jerry Morinaka, DFG
- 9:15-9:35 Fish Facility Holding Stress in Salmon**
Don Portz, USBR
- 9:35-9:55 Whole Facility Efficiency for Delta Smelt at the Tracy Fish Collection Facility**
Mark Bowen, USBR

9:55-10:15 Break

STRIPED BASS AND STURGEON (Moderator: Jeff McLain, NMFS)

- 10:15-10:35 Pushing the Limits of Survival: Multiple Stressors and their Effects on the Early Life Stages of Striped Bass**
David Ostrach, UCD
- 10:35-10:55 Status of Adult Striped Bass: San Francisco Bay-Delta Commercial Passenger Fishing Vessel Fishery**
Marty Gingras, DFG
- 10:55-11:15 Regulation and Conservation: Insight on the Southern Green Sturgeon DPS from Mixed Stock Analysis**
Josh Israel, UCD
- 11:15-11:35 Managing the Southern DPS of North American Green Sturgeon under the ESA: Progress on the Recent Listing**
Melissa Neuman & Jeff McLain, NMFS
- 11:35-11:55 Status of White Sturgeon Population and Commercial Passenger Fishing Vessel Fishery in the San Francisco Bay-Delta, 1964-2005**
Mike Donnellan, DFG
- 11:55-12:00 Concluding Remarks**
Chuck Armor, DFG

Lunch

12:00-1:00 (Boxed lunch available if requested on registration form)

POSTER PRESENTATIONS (in no particular order)

Results of a Two-Year Fish Entrainment Study at Morrow Island Distribution System in Suisun Marsh

Cassandra Enos (DWR), Jessica Sutherland (DWR), and Matthew L. Nobriga (CALFED)

The Benthic BioGuide: A Guide To The Most Abundant Benthos In The Upper San Francisco Estuary

Rachel Barnett (DWR)

The Development of an In-Situ Exposure System for Biomarker Experimentation in Fish at DWR Real-Time Monitoring Sites

Dan Riordan, Adam Biales, and Dave Bencic (DWR)

Do I Look Fat to You? Determining the Condition of Pelagic Fishes in the Upper San Francisco Estuary

Samantha H. Vu and Steven B. Slater (DFG)

Grow or Die: Trends in Growth of Pelagic Fishes of the Upper San Francisco Estuary

Randall Baxter, Kathy Hieb, Kevin Fleming, and Steven Slater (DFG)

Regional Food Habits of Pelagic Fishes of the San Francisco Estuary

Steven B. Slater (DFG)

Inverse Relation Between Delta Smelt's FMWT Abundance Index and Winter Exports

Gonzalo Castillo (USFWS) and Kevin Fleming (DFG)

A Novel Method to Develop an Otolith Microchemistry Model to Determine Striped Bass Habitat Use in the San Francisco Estuary

Corey C. Phillis (UCD), David J. Ostrach (UCD), Michelle Gras (UCD), Qingzhu Yin (UCD), B. Lynn Ingram (UCB), Joe G. Zinkl (UCD), and Peter K. Weber (UCB)

Model Construction for Dynamics of Striped Bass Population in the Sacramento River and San Francisco Estuary

Hanieh Haeri (UCD)

Results from the 2006 Dissolved Oxygen Study in the Stockton Ship Channel

Brianne Noble (DWR)

Quagga Mussel Identification

Tanya Veldhuizen and Brianne Noble (DWR)

Using carbon dioxide to remove predators from the Tracy Fish Collection Facility

Brent Bridges, Brandon Wu, and Bradd Baskerville-Bridges (USBR)

Application of Genetic Techniques to Understanding Critical Uncertainties in White Sturgeon Population Biology

Andrea Drauch (UCD)

POSTER PRESENTATIONS, CONTINUED

Demonstration of an interactive data visualization tool for water resource monitoring networks in the Delta and its catchment **Laptop demonstration******

Van Nieuwenhuyse, E.E., J. Sreevalsan-Nair, I. Hotz, L. Linsen, and B. Hamann (USBR)

Recent modifications to California Department of Fish and Game's Fall Midwater Trawl Survey

Dave Contreras (DFG)

Steelhead Pre-screen Loss in Clifton Court Forebay

Kevin W. Clark (DWR)

Long Term Trends in Delta Fish Species: Striped Bass

Eric T. Volkman (USFWS)

Long Term Trends in Delta Fish Species: Delta Smelt

Jack Ingram (USFWS)

Long Term Trends in Delta Fish Species: Longfin smelt

Lori Wichman (USFWS)

Long Term Trends in Delta Fish Species: Threadfin shad

Rick Wilder (USFWS)

Long Term Trends in Delta Fish Species: Salmon

Rachel Lux (USFWS)

Projects & Perspectives of the Non-native Invasive Species Program

Louanne McMartin and Jeffrey Herod (USFWS)

Aquatic Nuisance Species Program: A Collaborative Approach to Control and Manage Invasive Species

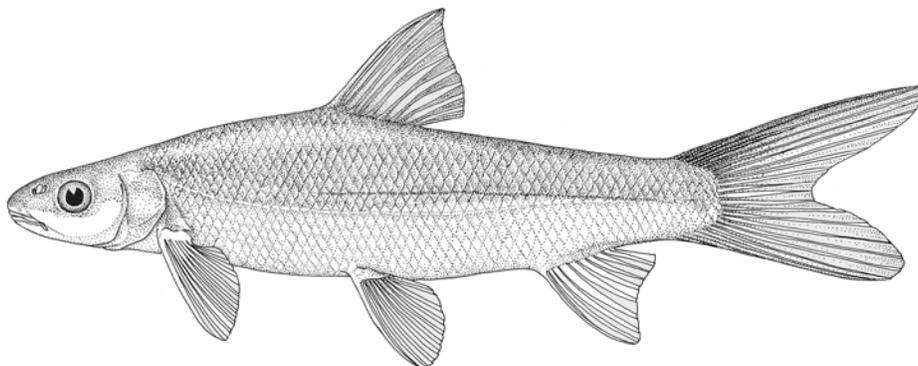
Denise A. Walther and Jeffrey Herod (USFWS)

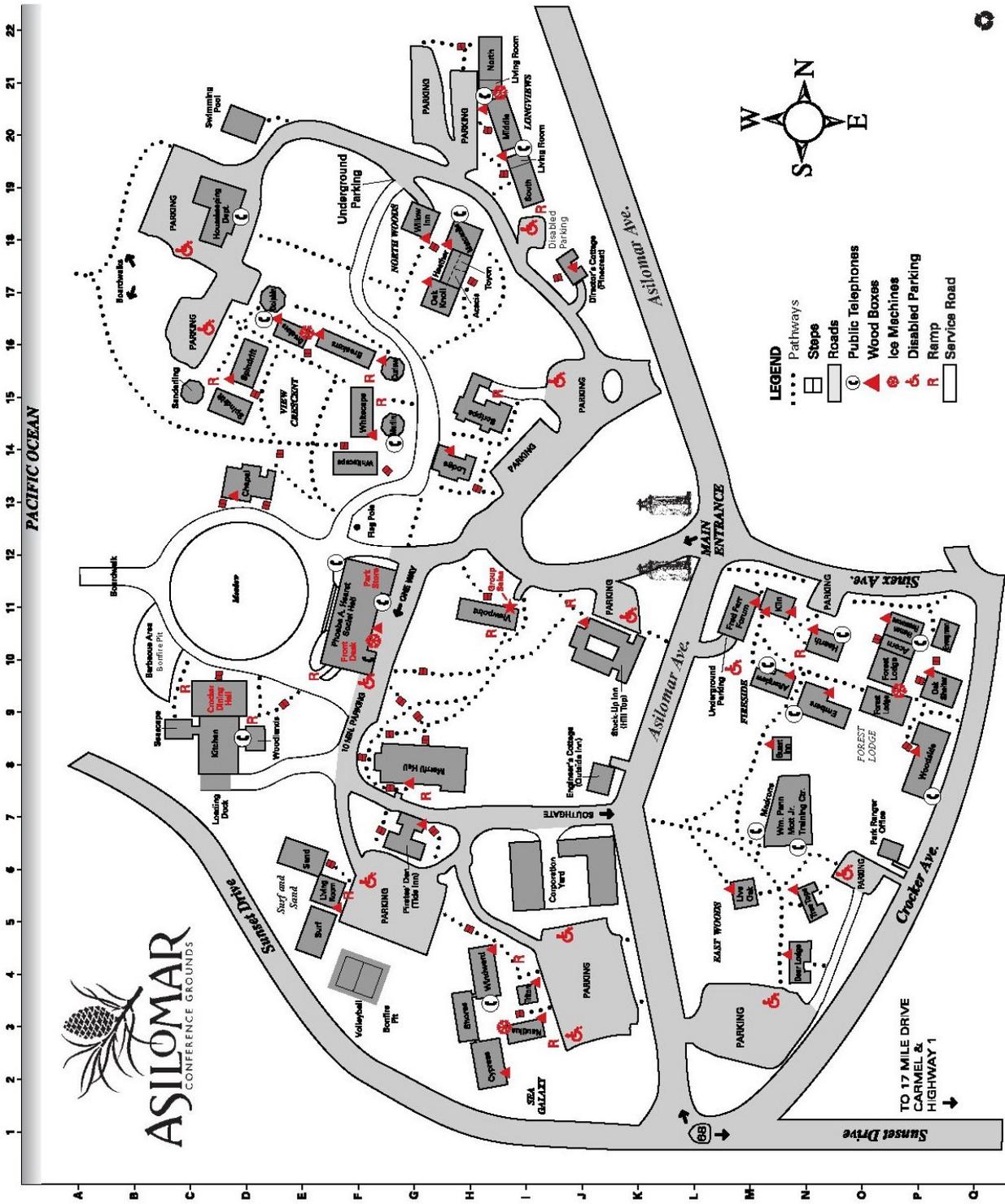
Methods and Observations During Juvenile Mitten Crab Monitoring in the Delta

Jonathan Thompson and Jeffrey Herod (USFWS)

Innovative Approaches and Emerging Technologies in Aquatic Environmental Monitoring

Theodore J. Swift (DWR)





FACILITY	ROOM #	MEETING ROOMS	LOC.
Langviews (H-21)			
Longview North	101-110	North Living Room	H-22
Longview Middle	111-120		H-21
Longview South	121-130	South Living Room	I-19
North Woods (G-18)			
Willow Inn	1025-1036	Heather	G-19
Manzanita	1001-1012	Toyon	H-18
Oak Knoll	1013-1024	Acacia	H-17
View Crescent (E-15)			
Whitecaps South	801-808	Marlin	F-14
Whitecaps North	809-820		F-15
Breakers East	821-832	Curlew	F-16
Breakers West	833-840	Dolpin	E-16
Spindrift South	841-848	Sanderling	D-15
Spindrift North	849-856		D-16
Fireside (O-10)			
Afterglow	1301-1312	Fred Farr Forum	M-9
Hearth	1325-1336	Klfn	N-10
Embers	1313-1324		N-9
Guest Inn	901-903		M-8
Forest Lodge (M-10)			
Forest Lodge	1201-1211	Accom	O-10
		Evergreen	P-11
		Oak Shelter	P-8
Woodside	1212-1223		
Historic Core			
Lodge	201-218		H-14
Scripps	301-323	Scripps Meeting Rm	H-15
Stuck-Up Inn (Hilltop)	401-414		K-10
Pirates' Den (Tide Inn)	501-510		G-6
Director's Cottage	1401-1403		J-18
(Pinecrest)			
Viewpoint		Viewpoint East	I-11
Group Sales Office			I-11
Merrill Hall			G-8
Chapel			D-14
Front Desk & Park Store / Phoebe A. Hearst Social Hall			F-10
Crocker Dining Hall		Crocker, Woodlands & Seascapes	D-9
Engineer's Cottage (Outside Inn)			J-8
Fire Academy Offices			J-8
Sea Galaxy (G-4)			
Sand	605-610	Surf & Sand Room	E-6
Surf	601-604		E-4
Windward	701-708	Triton	H-4
Shores	709-716		H-3
Cypress	717-724	Nautilus	H-2
Eastwoods (M-4)			
Live Oak	1101-1110		M-5
Tree Tops	1111-1120		N-5
Deer Lodge	1121-1130		N-3
William Penn Mott Jr. Training Center			N-7
Madrone			M-7
Activity Locations			
Barbecue Area			C-10
Swimming Pool			D-21
Volleyball Court			F-4
Corporation Yard		Facilities	J-6
Housekeeping			D-19
Woodhaven - Park Ranger Office			O-7

Welcome to our "Refuge by the Sea!"

We hope that we have answered all of your questions in this brochure. If you think of anything we can do to make your stay more enjoyable, please call our Front Desk at extension 2232.

Guest Service

Telephone extension 2232

Accessibility Needs

Please inform the front desk and security staff of any arrangements that need to be made for guests with special needs.

Activities

Outdoor year-round heated swimming pool, a sand volleyball court, ping-pong and billiard tables are available for guest use. Rauger and campfire programs can be planned in advance by calling the Park Ranger Office at (831) 372-4076. A lending library and board games are at the Front Desk. Coastal boardwalk and self-guided walking tours are also available.

Bike Rentals

Located at the Asilomar Park Store. Hours of operations are 9 am to 6 pm daily. All bike rentals include a helmet, a bike lock, and a bike trail map. All renters are required to go through a short safety orientation and are required to complete a rental agreement and liability release. Bikes are rented by the full or half day and are suspended on rainy days. For bike rental rates, please inquire at the Park Store.

Business Center

Located next to the front desk. Hours of operation are 6:30 am to 12 midnight daily. Charges are collected on the honor system. A list of charges are posted in the business center. Features include:

1. four dedicated local access lines
 2. one personal computer for word processing
 3. speaker phone for conference calls
- Photocopies and faxes are handled at the front desk.

Check-In Time: After 3:00 pm

Check-Out Time: By 12:00 noon

Guests will be charged 1/2 day rate for staying beyond 12:00 noon. After 4:00 pm, a full day's charge is made. Guests are responsible for unnecessary destruction, breakage or misuse of property.

Dry Cleaning

One day service is available if items are brought to the front desk by 8:30 am.

Facility Services

Heat is regulated in the individual rooms by ventilators, radiators or thermostats. For any problem involving plumbing, electrical or heating, contact facility services at extension 2232.

Housekeeping Service

Telephone extension 2276

Guest Amenities

Irons, ironing boards, hair dryers, and extra blankets and pillows can be delivered to guest rooms by our housekeeping staff. There are 5 ice machines on the grounds for your convenience (see map for locations). Ice buckets are in the guest rooms.

Jitney

ASILOMAR'S jitney is available for transporting guests anywhere on the grounds. Guests with disabilities will have priority.

Lost and Found

Articles left in rooms will be held for call for 90 days. Before checking out, check your room to be sure you have not forgotten anything.

Mail and Package Service

Post your letters in the mail slot at the front desk. Outgoing mail is picked up at 7:00 am daily. Incoming mail should be addressed: Your Name

670 The Name of the Conference you are attending
Asilomar Conference Grounds
P.O. Box 537
Pacific Grove, CA 95950

Indicate estimated arrival date. All guest mail is held at the front desk for pickup. Due to limited space, Asilomar Conference Grounds cannot accept packages delivered prior to your conference. Please contact TRICORD Convention & Exhibit Services (831) 373-4347 or alternate delivery service to store and deliver your packages.

Messages and Faxes

Incoming messages are received at the front desk. Telephone messages are delivered periodically to the guest's room. Fax services are available at the front desk for a nominal charge.

Meal Service

All meals are served semi-cafeteria style at Crocker Dining Hall. Your group will be seated together at designated tables.

Breakfast 7:30 am to 9:00 am
Lunch 12:00 noon to 1:00 pm
Dinner 6:00 pm to 7:00 pm

Neither cooking nor coffee making is permitted in the guest rooms or meeting rooms. Individual visitors are also welcome at Crocker Dining Hall. Meal tickets for individual meals may be purchased at the front desk.

Medical Service

Please contact the front desk for medical assistance by calling extension 2200 or dialing "0." No attempt is made to provide

medical service or give advice or treatment. The Emergency Room of the Community Hospital of the Monterey Peninsula is located on Highway 68 east near Highway 1. Telephone is 624-5311. Asilomar is not responsible for personal injury to guests as a result of their carelessness.

Park Store

The Park Store is located in the administration building (Pheobe A. Hearst Social Hall). Hours of operation are 6:30 am to 9:00 pm daily. Coffee and espresso drinks, bakery items, cold beverages, personal care items, phone cards, and gifts are available.

Telephone Service

Asilomar's telephone number is (831) 372-8016

To preserve the refuge atmosphere at Asilomar, our guest rooms are free from the distraction of televisions and telephones. An in-house telephone is located in each building for on-grounds calls only. In an emergency, dial "0." Use the nearest public telephone for local or long distance calls. Locations of public telephones are marked on the map. TDD machine may be obtained from the front desk for your use while at Asilomar.

Your Valuables

Safe deposit boxes are available at the front desk for your use. (Note: Under California law, the innkeeper assumes a maximum liability of \$500.00 for any items under his safekeeping. Civil Code 1840.) Please lock your windows and doors whenever you leave your room.

Park Information (831) 372-4076

Quiet Hours on Grounds

Please respect your neighbors' rights and maintain quiet between 10:00 pm and 6:00 am. (California Code of Regulations, Sec. 432(b).)

The Environment

Asilomar's 107 acres are dedicated to a natural ecological environment. Please walk on paved area only. The dunes are a particularly fragile environment and we request that you use the boardwalk to the beach. Trash receptacles are located throughout the grounds for litter. Asilomar encourages recycling whenever possible. Receptacles are available. Please do not litter in the park. Use cigarette receptacles for cigarette butts. No collecting of wood, animals, rocks, shells or sand is allowed.

Parking

Parking at Asilomar is provided for guests residing on grounds. Guests are required to park in designated areas. Disabled parking is available where indicated on the map (on the reverse side). Please note the one-way roads, speed limit of 15 mph and 10 minute parking zones. Roads must be kept clear at all times for emergency and service vehicles. Violators are subject to citation under California Vehicle Code and under State Park Rules and Regulation. No RV's are allowed on grounds.

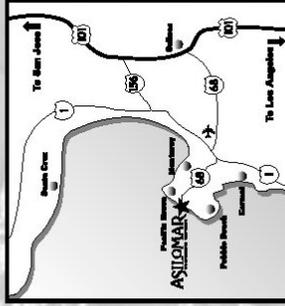
Pets and Service Animals

State Park regulations do not permit pets overnight in any park building and suggests that no pet be left unattended in a closed vehicle overnight, hence, we must ask you to leave your pet at home.



Experience the Monterey Peninsula's "Refuge by the Sea"

800 Asilomar Avenue
Post Office Box 537
Pacific Grove, California 93950
Telephone (831) 372-8016
Reservations (831) 642-4242
Group Sales (831) 642-4222
Facsimile (831) 372-7227
www.asilomar.com



Location: Located just 71 miles south of San Jose and 120 miles south of San Francisco. Conveniently served by the Monterey Peninsula, San Jose, San Francisco and Oakland airports.

CALIFORNIA STATE PARKS
Delaware North Parks Services

NO RV's ON GROUNDS NO CAMPING FACILITIES NO SLEEPING BAGS NO BIKES IN ROOMS

HOUSE PHONE EMERGENCY NUMBER • DIAL 2200