



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Southwest Fisheries Science Center
8604 La Jolla Shores Drive
La Jolla, CA 92037

1/8/07

CRUISE INSTRUCTIONS

NOAA Ship: NOAA Ship *David Starr Jordan*

Cruise Number: DS-07-01

Cruise Dates: 12 January - 03 February, 2007

Cruise Title: CalCOFI and northern extension.

Study Area: US/Mexican boarder to San Francisco out to 400 nautical miles.

Itinerary:

Ship loading and gear preparation: 08 - 11 JAN.

Leg 1: 12 JAN - Station 93.3/26.7 28 JAN - Arrive Avila Beach, CA

Leg 2: 27 JAN - Station 73.3/50.0 29 JAN - Arrive Monterey, CA

Leg 3: 29 JAN - Station 66.7/50.0 03 FEB - Arrive San Diego, CA

Tracklines and station positions are included at the end of this document in Appendix 1.

Sponsoring Institution: NOAA/NMFS, Southwest Fisheries Science Center (SWFSC)
Fisheries Resources Division (FRD)

Cruise Description and Objectives:

1. To conduct continuous underway sampling of surface waters. Temperature and salinity will be automatically logged by computer with the output from the GPS navigational unit.
2. To record current profiles throughout the duration of the cruise with the Acoustic Doppler Current Profiler.



3. To continue an ongoing assessment of pelagic fish stocks between La Jolla and San Francisco, California.
4. To monitor environmental conditions within the CalCOFI survey area.
5. To make continuous observations of sea birds and marine mammals.
6. To record continuous acoustic targets obtained with the EK-500 or EK-60 scientific sounder.

Chief Scientist: David A. Griffith, SWFSC (858) 546-7155, Dave.Griffith@noaa.gov

PLAN OF OPERATIONS

1.0 OPERATIONS

1.1 The *Jordan* will conduct operations in the Southern California Bight as well as occupying stations north of Point Conception up to San Francisco.

1.1.1 Each standard CalCOFI station will include the following:

1.1.1.1 CTD/Rosette - consisting of 24 10-liter hydrographic bottles will be lowered to 500 meters (depth permitting) to measure physical parameters and collect water at discrete depths for analysis of: salinity, nutrients and chlorophyll.. Casts conducted on line 66.7 will be to a depth of 1000 meters.

1.1.1.2 CalBOBL (CalCOFI Bongo) - standard oblique plankton tow with 300 meters of wire out, depth permitting, using paired 505 μm mesh nets with 71 cm diameter openings. The technical requirements for this tow are: Descent wire rate of 50 meters per minute and an ascent wire rate of 20 meters per minute. All tows with ascending wire angles lower than 38° or higher than 51° in the final 100 meters of wire will be repeated. Additionally, a 45° wire angle should be closely maintained during the ascent and descent of the net frame.

1.1.1.3 Manta net (neuston) tow - using a 505 μm mesh net on a frame with a mouth area of 0.1333 m². Tows are 15 minutes in duration at towing speed of approximately 1.5 - 2.0 knots. Wire angles should be kept between 15° and 25°.

1.1.1.4 Weather observations.

1.1.1.5 Pairovet net - will be fished from 70 meters to the surface (depth permitting) using paired 25 cm diameter 150 μm mesh nets out to and including station 70. The technical requirements for Pairovet tows are: Descent rate of 70 meters per minute, a terminal depth time of 10 seconds and an ascent rate of 70 meters per minute. All tows with wire angles exceeding 15° during the ascent will be repeated.

1.1.1.6 PRPOOS (Planktonic Rate Processes in Oligotrophic Ocean Systems net - will be taken at all stations on line 90.0 and 80.0 as well as stations out to and including station 70.0 on lines 86.7 and 83.3. These stations are occupied as part of the LTER (Long Term Ecological Research) project. The mesh of the PRPOOS net is 202 μm and the tow is a vertical cast up from 210 meters.

1.1.1.7 Primary productivity - at about 1100 hours on each day of the cruise a primary productivity CTD cast consisting of six 10-liter hydrographic bottles will be carried out. The cast arrangement will be determined by a Secchi disc observation. The purpose of the cast is to collect water from six discrete depths for daily *in situ* productivity experiments. Measurements of extracted chlorophyll and phaeophytin will be obtained with a fluorometer. Primary production will be measured as C^{14} uptake in a six hour *in situ* incubation. Nutrients will be measured with an auto-analyzer. All radioisotope work areas will be given a wipe test before the departure of the SIO and MBARI technical staff.

1.1.1.8 A light meter - will be used to measure the light intensity in the euphotic zone once a day with the primary productivity cast.

1.1.2 Thermosalinometer Sampling - The ship will provide and maintain a thermosalinometer (TSG), which is calibrated and in working order, for continuous measurement of surface water temperature and salinity. A backup unit (calibrated and in working order) will also be provided by the vessel and remain aboard during the cruise. The Scientific Computing System (SCS) will serve as the main data collection system.. All SCS data will be provided to SWFSC personnel at the completion of the cruise.

1.1.3 Acoustics –The scientific EK-60 (or EK-500) depth sounder will be operated, at 38, 120 and 200 KHz and interfaced to a data acquisition system to estimate micronekton biomass between 0 and 500 m. The vessel's EQ-50 depth sounder may be used at the discretion of the Commanding Officer, but will normally remain off while underway. The ship shall inform the Cruise Leader of any use of the vessel's EQ-50, as it interferes with the signals received on the scientific EK-60. Its use will be continuous.

1.1.4 ADCP – The ship's ADCP should run continuously and be logged to a data acquisition system. Complete system settings will be provided by the oceanographer, but will include 5-minute averaging of currents, AGC and 4 beam returns in 60 8-meter bins.

1.1.5 Marine mammal observations - During transit between stations, a bird observer and marine mammal observer will be recording location and species of various birds and marine mammals.

1.1.6 Acoustic hydrophone - During transit between most daylight stations, an acoustic hydrophone array will be towed from the stern with a cable/winch to record sounds from marine mammals. Upon approaching a station, a sonobuoy will be deployed one nautical mile prior to stopping for station work.

1.1.7 CUFES - The egg pump will be mounted inside the ship's hull drawing water from a depth of three meters. During the grid occupation, the pump will run continuously between stations to sample any pelagic fish eggs.

1.1.8 SCCOOS - An additional nine stations will be occupied within the CalCOFI pattern for SCCOOS (S. California Coastal Ocean Observation System). These are 20 meter depth stations and will consist of a CTD lowered to within a few meters from the bottom and a Bongo tow. These stations are included in the original station plans provided to the ship.

1.1.9 HARP retrieval - If time and weather permit, a moored HARP acoustic package weighing approximately 900 lbs. will be retrieved from about 800 meters of water depth. The position of the mooring is 34° 19.0'N, 120° 48.1'W (station 80.0 55.0). The HARP will be stowed on deck for the duration of the cruise.

2.0 SCIENTIFIC PERSONNEL

2.1 Chief Scientist - The Chief Scientist is David A. Griffith, SWFSC, at phone (858) 546-7155.

The Chief Scientist is authorized to alter the scientific portion of this cruise plan with the concurrence of the Commanding Officer, provided that the proposed changes will not: (1) jeopardize the safety of personnel or the ship, (2) exceed the time allotted for the cruise, (3) result in undue additional expense, or (4) change the general intent of the project.

2.2 Participating Scientists

Please see Appendix 3.

2.3 Medical Forms - All scientific personnel will complete a NOAA Health Services Questionnaire (NHSQ) prior to embarking, as per NC Instruction 6000. This form will be routed through MOP Health Services for approval 30 days prior to the cruise.

3.0 EQUIPMENT

3.1 Supplied by scientific party:

1. -80°C Freezer (SWFSC)
2. 37% Formalin (SWFSC)
3. Ethanol (SWFSC)
4. Tris buffer (SWFSC)
5. Sodium borate (SWFSC)
6. 30 cc and 50 cc syringes (SWFSC)
7. Canulas (SWFSC)
8. Pint, quart and gallon jars (SWFSC)
9. Inside and outside labels (SWFSC)

10. CalCOFI net tow data sheets (SWFSC)
11. 71 cm CalCOFI Bongo frames (SWFSC)
12. 71 cm CalCOFI 505 μm mesh nets (SWFSC)
13. CalCOFI 150 μm Calvet nets and codends (SWFSC)
14. CalCOFI Pairovet frames (SWFSC)
15. 333 μm mesh codends (SWFSC)
16. Inclinometer for bongo tows (SWFSC)
17. Digital flowmeters (SWFSC)
18. PRPOOS frames (SIO)
19. 170 lb PRPOOS weight (SIO)
20. 202 μm mesh PRPOOS nets and codends (SIO)
21. 75 lb Bongo weight (SWFSC)
22. 100 lb hydro weights (SWFSC)
23. CalCOFI Manta net frames (SWFSC)
24. 60 cm CalCOFI 505 μm mesh Manta nets (SWFSC)
25. Standard CalCOFI tool boxes (SWFSC)
26. Bucket thermometers and holders (SWFSC)
27. Hand held inclinometer for Pairovet tows (SWFSC)
28. Oxygen auto-titration rig with reagents (SIO)
29. Oxygen flasks (SIO)
30. Guildeline Portasal (SWFSC, SIO)
31. Salinity bottles (SIO)
32. Standard sea water (SIO)
33. Data sheets for scheduled hydrographic work (SIO)
34. Weather observation sheets (SIO)
35. Primary productivity incubation rack (SIO)
36. C^{14} and other chemicals for primary productivity work (SIO)
37. CTD and rosette (SIO)
38. SCCOOSBOP (S. Calif. Coastal Ocean Obs. Sys. Bio-optical Package (SIO)
39. 10 liter hydrographic bottles (SIO)
40. Turner fluorometer (SIO)
41. 90% acetone and all supplies for chlorophyll extraction (SIO)
42. Nutrient vials (SIO)
43. EK-60 Scientific sounder (SWFSC)
44. LOPC (SIO)
45. Isotope van (SIO)
46. LTER van (SIO)
47. CUFES (SWFSC)
48. Marine mammal hydrophone (SIO)
49. Disposable sonobuoys (SIO)
50. SeaMac electric winch (SIO)

3.2 Supplied by ship - We request the following systems and their associated support services, sufficient consumables, back-up units, and on-site spares. All measurement instruments are assumed to have current calibrations and we request that all pertinent calibration information be included in the data package.

1. Starboard hydro winch with ¼" cable for standard Bongo, Pairovet and Manta tows
2. Port winch with .322" conductive cable
3. J-frame w/block to accommodate .322" cable
4. Constant temperature room set at 22°C ±1°C (71.5°F ±2°F)
5. Winch monitoring system
6. Seabird thermosalinometer
7. Knudsen 12 kHz depth recorder
8. Acoustic Doppler Current Profiler w/writeable CD drive

3.3 Installation and Maintenance - Prior to departure from San Diego the Chief Scientist and members of the scientific party may board the vessel, with permission of the Commanding Officer, to test survey equipment and environmental sensors. It is also requested that the constant temperature room be set at 22°C ±1°C (71.5°F ±2°F) prior to departure.

3.4 Hazardous Materials - The Chief Scientist shall be responsible for complying with NC Instruction 6280a, Hazardous Materials and Hazardous Waste; policy, guidance, and training, dated February 4, 1991, paragraph 7.g and paragraph 9. By Federal Law, the ship may not sail without a complete inventory of Material Safety Data Sheets (MSDS's) and appropriating neutralizing agents, buffers, and/or absorbents in amounts adequate to address spills of a size equal to the amount of chemicals brought on board. The Chief Scientist will provide the Commanding Officer with a copy of all MSDS's prior to the cruise.

4.0 DATA RESPONSIBILITIES

4.1 Collection of Data - The Chief Scientist will receive all original data related to the project. The Chief Scientist will in turn furnish the Commanding Officer with a complete inventory listing of all data gathered by the scientific party, detailing types of operations and quantities of data prior to departing the ship. All data gathered by the vessel's personnel that are desired by the Chief Scientist will be released to her, including supplementary data specimens and photos gathered by the scientific crew.

4.2 Dissemination of Data - The Chief Scientist is responsible for the quality assurance, disposition and archiving of data and specimens collected aboard the ship. The Chief Scientist is also responsible for the dissemination of copies of these data to cruise participants and to any other requesters. The SWFSC cruise report will be submitted according to SWFSC procedures to appropriate persons and groups.

4.3 Evaluation Form - The Chief Scientist will complete the Ship Operations Evaluation Form and forward it to the Office of Marine and Aviation Operations. The Commanding Officer will provide this form.

5.0 ADDITIONAL INVESTIGATIONS AND PROJECTS

5.1 Ancillary Projects - Ancillary projects are secondary to the objectives of the cruise, should be treated as additional investigations, do not have representation aboard, and are accomplished by the ship's force. Ancillary tasks will be accomplished in accordance with the NOAA Fleet Standing Ancillary Instructions. Any additional work will be conducted so as not to interfere with operations as outlined in these instructions. The Chief Scientist will be responsible for determining the priority of additional work relative to the primary project with approval from the Commanding Officer.

6.0 COMMUNICATIONS

6.1 Radios - The Cruise Leader or designee may request, from the Commanding Officer, the use of radio transceivers aboard the ship to communicate with other vessels and aircraft, if necessary.

6.2 Telephone - The Cruise Leader or designee may require access to the ship's INMARSAT or cellular telephone systems with permission from the Commanding Officer. The Commanding Officer will provide the Cruise Leader with a log of all INMARSAT calls made from the ship for SWFSC business at the end of each leg. In accordance with the Communications Reimbursement Policy, SWFSC will pay these charges via a transfer of funds from SWFSC to the ship.

6.3 Electronic Mail - All members of the scientific party will have access to e-mail for communications with persons not aboard the ship. The amount of such communication traffic will be determined by the Chief Scientist.

6.4 Routine Reports - The Cruise Leader will submit a weekly cruise report, along with time and attendance for the scientific party, to the Survey Coordinator each Thursday during the cruise via e-mail or, if e-mail is not functioning properly, via fax. Richard Charter at SWFSC will be on the distribution list for the ship's noon position reports.

7.0 MISCELLANEOUS

7.1 Pre-cruise Meeting - A pre-cruise meeting between the Chief Scientist and the Commanding Officer (and his staff) will be held prior to the start of the cruise to identify operational requirements (i.e., overtime, modifications, repairs or procurement). The date and time for this meeting is yet to be scheduled.

7.2 Underway Meetings - Meetings between the Commanding Officer (and other officers) and the Cruise Leader should occur at the beginning and end of each leg to discuss and solve any problems or changes that may arise. Additional meetings should occur as needed.

7.3 Debrief - A post-cruise debriefing will be held between the Chief Scientist and the Commanding Officer. If serious problems are identified, the Commanding Officer shall notify the Marine Operations Center, Pacific, in the most direct means available. The Chief Scientist shall document identified problems in the Ship Operations Evaluation Form. The time and date for the debrief will be determined toward the end of the cruise.

7.4 Time and Attendance - Time and Attendance will be filled out by the SWFSC timekeeper while the ship is at sea, based on information transmitted by the Cruise Leader to the Survey Coordinator. Scheduled overtime is authorized for Saturdays, Sundays, holidays and any hours over a standard eight hour week day. Irregular overtime will be authorized by the Cruise Leader as required. SWFSC personnel are authorized per diem at the rate of \$3.00 per day to be paid via a travel voucher at the termination of the cruise. Task Number 28LEF01-P15 will pay for per diem and overtime for any SWFSC permanent, term or temporary employees.

Time and Attendance for Aquatic Farms contract employees will be based upon a predetermined schedule. If events of the cruise alter the planned schedule, the Cruise Leader will notify the Survey Coordinator, and appropriate changes will be brought to the attention of Aquatic Farms.

7.5 Navigation - Primary control will be GPS, also dead reckoning based on visual bearings and radar ranges when possible.

7.6 Scientific Spaces - The Cruise Leader shall be responsible for the proper upkeep and cleaning of all spaces assigned to the scientific party, both laboratory and living spaces, throughout the cruise. The Cruise Leader or Chief Scientist will make berthing assignments for scientific personnel on a per-leg basis, with approval of the Commanding Officer.

7.7 Foreign Nationals Access to NMAO Vessels -
Please see Appendix 4.

For further information contact Richard Charter, Southwest Fisheries Science Center, National Marine Fisheries Service, NOAA, 8604 La Jolla Shores Drive, La Jolla, CA 92037; Richard.Charter@noaa.gov, Phone (858) 546-7157. More information about the cruise and project can be found at the project's website:
<http://swfsc.nmfs.noaa.gov/frd/CalCOFI/CC1.htm>

Prepared by: _____
David Griffith
Chief Scientist, SWFSC

Date: _____

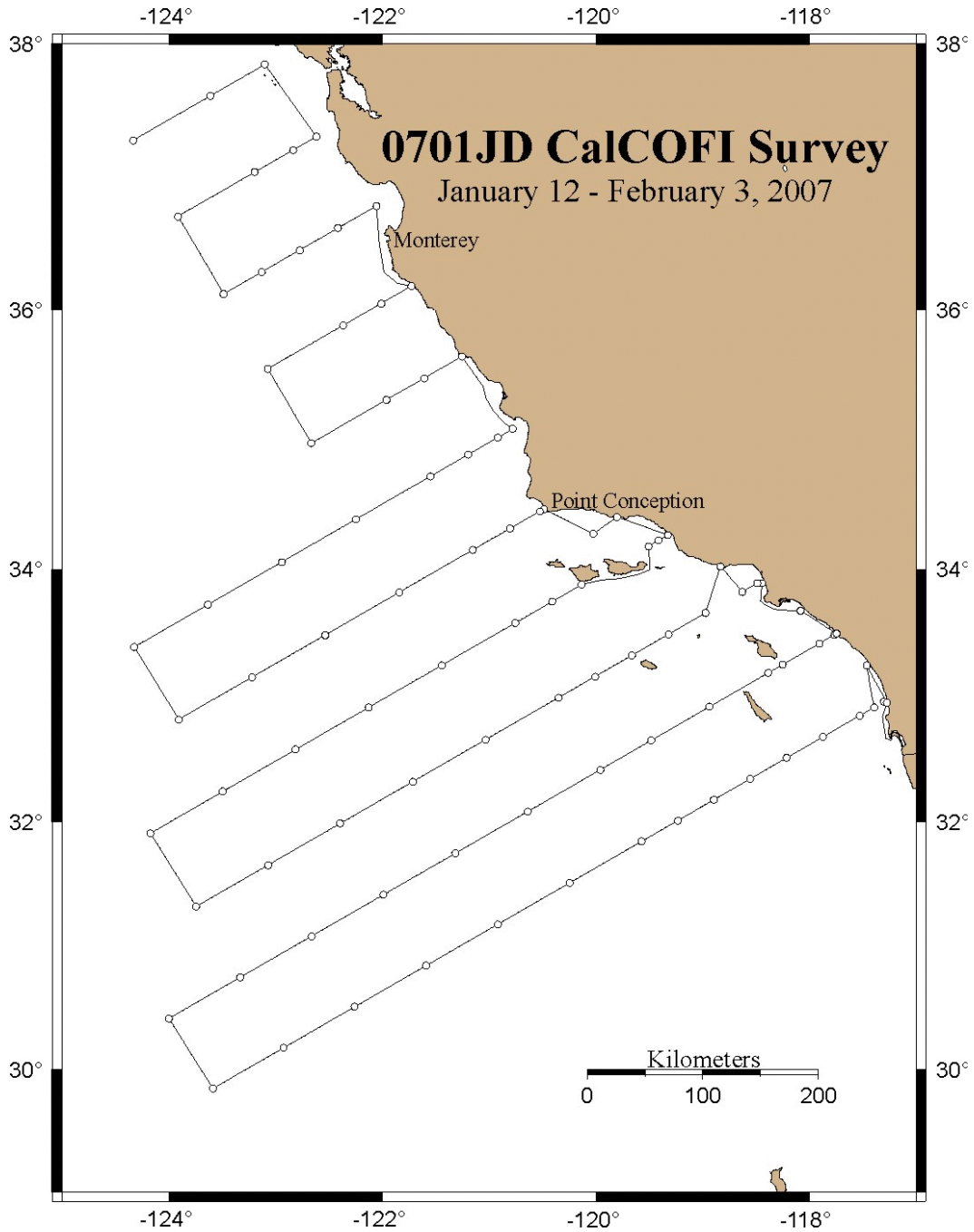
Approved by: _____
William W. Fox, PhD.
Science & Research Director
Southwest Region

Date: _____

Approved by: _____
CAPT Jon Rix
Commanding Officer
NOAA Marine Operations Center - Pacific

Date: _____

Appendix 1. NOAA Ship *David Starr Jordan* track lines for CalCOFI 0501JD



Appendix 2. Station positions:

	Line	Station	Dlatitude	Dlongitude
1	93.3	26.7	32.95637243	117.3053809
2	93.4	26.4	32.94905192	117.2735654
3	91.7	26.4	33.24350056	117.4654169
4	93.3	28	32.91303909	117.3943818
5	93.3	30	32.84637243	117.5312206
6	93.3	35	32.67970576	117.8728643
7	93.3	40	32.51303909	118.2138649
8	93.3	45	32.34637243	118.5542278
9	93.3	50	32.17970576	118.8939582
10	93.3	55	32.01303909	119.2330612
11	93.3	60	31.84637243	119.5715421
12	93.3	70	31.51303909	120.2466579
13	93.3	80	31.17970576	120.9193461
14	93.3	90	30.84637243	121.5896467
15	93.3	100	30.51303909	122.2575992
16	93.3	110	30.17970576	122.9232422
17	93.3	120	29.84637243	123.5866142
18	90	120	30.41794919	123.9989326
19	90	110	30.75128253	123.3316429
20	90	100	31.08461586	122.6620162
21	90	90	31.41794919	121.9900131
22	90	80	31.75128253	121.3155939
23	90	70	32.08461586	120.6387183
24	90	60	32.41794919	119.9593451
25	90	53	32.65128253	119.4822756
26	90	45	32.91794919	118.9355113
27	90	37	33.18461586	118.3870812
28	90	35	33.25128253	118.2497109
29	90	30	33.41794919	117.9058212
30	90	28	33.48461586	117.7680788
31	90	27.7	33.49461586	117.7474083
32	88.5	30.1	33.67442348	118.0836933
33	86.8	32.5	33.88887212	118.4442347
34	86.7	33	33.88952596	118.4903339
35	86.7	35	33.82285929	118.6287319
36	85.4	35.8	34.02135923	118.8341306
37	86.7	40	33.65619263	118.9742516
38	86.7	45	33.48952596	119.3190964
39	86.7	50	33.32285929	119.6632718
40	86.7	55	33.15619263	120.0067835
41	86.7	60	32.98952596	120.3496367
42	86.7	70	32.65619263	121.0333897
43	86.7	80	32.32285929	121.7145734
44	86.7	90	31.98952596	122.3932299

45	86.7	100	31.65619263	123.0694006
46	86.7	110	31.32285929	123.7431265
47	83.3	110	31.91175657	124.1703953
48	83.3	100	32.2450899	123.4923224
49	83.3	90	32.57842323	122.8117321
50	83.3	80	32.91175657	122.1285823
51	83.3	70	33.2450899	121.4428307
52	83.3	60	33.57842323	120.7544339
53	83.3	55	33.7450899	120.4092298
54	83.3	51	33.87842323	120.1325788
55	83.3	42	34.17842323	119.5085132
56	83.3	40.6	34.2250899	119.4112355
57	83.3	39.4	34.2650899	119.3278113
58	81.7	43.5	34.40555136	119.80037
59	81.8	46.9	34.27489752	120.0252367
60	80	50.5	34.46666667	120.4890554
61	80	51	34.45	120.5239048
62	80	55	34.31666667	120.802448
63	80	60	34.15	121.15
64	80	70	33.81666667	121.8430351
65	80	80	33.48333333	122.5333494
66	80	90	33.15	123.2209872
67	80	100	32.81666667	123.9059922
68	76.7	100	33.38824343	124.3228913
69	76.7	90	33.72157677	123.633345
70	76.7	80	34.0549101	122.9410906
71	76.7	70	34.38824343	122.2460832
72	76.7	60	34.72157677	121.5482772
73	76.7	55	34.88824343	121.1983102
74	76.7	51	35.02157677	120.9178206
75	76.7	49	35.08824343	120.7774028
76	73.3	50	35.64380737	121.2557479
77	73.3	55	35.47714071	121.6090134
78	73.3	60	35.31047404	121.9615407
79	73.3	70	34.97714071	122.6644048
80	70	70	35.54871747	123.0734784
81	70	60	35.88205081	122.3655627
82	70	55	36.04871747	122.0104783
83	70	51	36.18205081	121.7258644
84	66.7	50	36.78696091	122.0563271
85	66.7	55	36.62029424	122.4148226
86	66.7	60	36.45362757	122.7725371
87	66.7	65	36.28696091	123.1294771
88	66.7	70	36.12029424	123.4856487
89	63.3	70	36.70919152	123.9136417
90	63.3	60	37.04252485	123.1950214

91	63.3	55	37.20919152	122.8345184
92	63.3	52	37.30919152	122.6178311
93	60	53	37.84743495	123.099418
94	60	60	37.61410162	123.6082525
95	60	70	37.28076828	124.3323747

Arrive San Diego

Appendix 3. Personnel for the CalCOFI 0501 Survey

David Starr Jordan Leg I:

Position	Name	Affiliation	Berth
Chief Scientist	Dave Griffith	SWFSC	
Fishery Biologist	Ron Dotson	SWFSC	
Fishery Biologist	Amy Hays	SWFSC	
Biologist	Bryan Overcash	CDFG	
Oceanographer	Dave Wolgast	SIO	
Oceanographer	Jim Wilkinson	SIO	
Oceanographer	Jennifer Sheldon	SIO	
Oceanographer	Fernando Ramirez	SIO	
Oceanographer	Shonna Dovel	SIO	
Oceanographer	Megan Roadman	SIO	
Chemist	Susan Becker	SIO	
Marine Mammal Biologist	Greg Campbell	SIO	
Marine Mammal Biologist	Annie Douglas	Cascadia Research	
Bird Observer	Lisa Sheffield	PRBO	
Volunteer	Jeffrey Lewis	SIO	

David Starr Jordan LegII:

Position	Name	Affiliation	Berth
Chief Scientist	Ron Dotson	SWFSC	
Fishery Biologist	Amy Hays	SWFSC	
Fishery Biologist	Sue Manion	SWFSC	
Biologist	Bryan Overcash	CDFG	
Oceanographer	Dave Wolgast	SIO	
Oceanographer	Jim Wilkinson	SIO	
Oceanographer	Jennifer Sheldon	SIO	
Oceanographer	Fernando Ramirez	SIO	
Chemist	Susan Becker	SIO	
Marine Mammal Biologist	Nadia Rubio	SIO	
Marine Mammal Biologist	Annie Douglas	Cascadia Research	
Bird Observer	Lisa Sheffield	PRBO	

Oceanographer	Marguerite Blum	MBARI
Oceanographer	TBD	MBARI

David Starr Jordan LegIII:

Position	Name	Affiliation	Berth
Chief Scientist	Ron Dotson	SWFSC	
Fishery Biologist	Amy Hays	SWFSC	
Fishery Biologist	Sue Manion	SWFSC	
Biologist	Bryan Overcash	CDFG	
Marine Mammal Biologist	Nadia Rubio	SIO	
Marine Mammal Biologist	Annie Douglas	Cascadia Research	
Bird Observer	Lisa Sheffield	PRBO	
Oceanographer	Marguerite Blum	MBARI	
Oceanographer	TBD	MBARI	

Appendix 4. Foreign National Access

Foreign National Access and Deemed Export Controls on NMAO Vessels

All foreign national access to the vessel shall be in accordance with NAO 207-12 and RADM De Bow's March 16, 2006 memo (<http://deemedexports.noaa.gov>). The foreign national's sponsor is responsible for obtaining clearances and export licenses required and for providing for required escorts by the NAO. Programs sponsoring foreign nationals should consult with their designated line office personnel to assist with the process (<http://deemedexports.noaa.gov/contacts.html>).

The following are basic requirements. Full compliance with NAO 207-12 is required.

Responsibilities of the Chief Scientist:

Ensure the following is provided to the Commanding Officer before any foreign national will be allowed on board for any reason:

1. Written notification identifying the NOAA Program individual who is responsible for ensuring compliance with NOAA and export regulations for the foreign national (see Foreign National Sponsor responsibilities below).
2. A copy of the DOC/OSY clearance authorization for access by the foreign national.
3. A copy of Appendix B of NAO 207-12 with NOAA Chief Administrative Officer concurrence endorsement.

4. Written notification that the foreign national has been cleared against the State, Commerce and Treasury departments' Lists to Check.
<http://www.bis.doc.gov/ComplianceAndEnforcement/ListsToCheck.htm>
5. Provide the NOAA Foreign National List spreadsheet for each foreign national in the scientific party.

Escorts – The Chief Scientist is responsible to provide escorts to comply with NAO 207-12 Section 5.10, or as required by the vessel's DOC/OSY Regional Security Officer.

Ensure all non-foreign national members of the scientific party receive the briefing on Espionage Indicators (NAO 207-12 Appendix A) at least annually or as required by the servicing Regional Security Officer.

Export Control - The Chief Scientist is responsible for complying with NAO 207-12 and the development of Technology Access Control Plans for items they bring aboard. The Chief Scientist must notify the Commanding Officer of any export controlled items they bring aboard and any access restrictions associated with these items.

The Commanding Officer and the Chief Scientist will work together to implement any access controls necessary to ensure no unlicensed export occurs of any controlled technology onboard regardless of ownership.

Responsibilities of the Commanding Officer:

Ensure only those foreign nationals with DOC/OSY clearance are granted access..

Deny access to OMAO platforms and facilities by foreign nationals from countries controlled for anti-terrorism (AT) reasons and individuals from Cuba or Iran without written NMAO approval and compliance with export and sanction regulations.

Ensure foreign national access is permitted only if unlicensed deemed export is not likely to occur.

Ensure receipt from the Chief Scientist of the NOAA Foreign National List spreadsheet for each foreign national in the scientific party.

Ensure Foreign Port Officials, e.g., Pilots, immigration officials, receive escorted access in accordance with maritime custom to facilitate the vessel's visit to foreign ports.

Export Control - 8 weeks in advance of the cruise, provide the Chief Scientist with a current inventory of OMAO controlled technology onboard the vessel and a copy of the vessel Technology Access Control Plan (TACP). Also notify the Chief Scientist of any OMAO-sponsored foreign nationals that will be onboard while program equipment is aboard so

that the Chief Scientist can take steps to prevent unlicensed export of Program controlled technology.

The Commanding Officer and the Chief Scientist will work together to implement any access controls necessary to ensure no unlicensed export occurs of any controlled technology onboard regardless of ownership.

Ensure all OMAO personnel onboard receive the briefing on Espionage Indicators (NAO 207-12 Appendix A) at least annually or as required by the servicing Regional Security Officer.

Responsibilities of the Foreign National Sponsor

Export Control - The foreign national's sponsor is responsible for obtaining any required export licenses and complying with any conditions of those licenses prior to the foreign national being provided access to the controlled technology onboard regardless of the technology's ownership.

The Departmental Sponsor/NOAA of the foreign national shall assign an on-board Program individual, who will be responsible for the foreign national while on board. The identified individual must be a U.S. citizen, NOAA employee or be approved by the vessel's DOC Regional Security Officer homeport.

Ensure completion and submission of Appendix C (Certification of Conditions and Responsibilities for a Foreign National Guest) as required by NAO 207-12 Section 5.03.h