APPENDIX M

Summary of 1995-97 Data
Organic Chemicals in Mussel, Oyster, Shore Crab, and Sand Worm
(ppb, wet weight)
### APPENDIX M

**State Mussel Watch Program**

**Summary of 1995-97 Data:** Organic Chemicals in Mussel, Oyster, Shore Crab, and Sand Worm (ppb, wet weight)

| Station Number | Station Name                              | Sample Type* | Sample Date | Aldrin | alpha-Chlorodane | cis-Chlorodane | gamma-Chlorodane | trans-Chlorodane | cis-Nonachlor | trans-Nonachlor | Oxy-chlorodane | Total Chlorpyrifos | DaTChal |
|----------------|-------------------------------------------|--------------|-------------|--------|------------------|---------------|------------------|------------------|---------------|----------------|----------------|---------------------|---------|
| 1.0            | Crescent City Harbor                      | RCM          | 04/09/97    | ND     | ND               | 0.5           | 0.3              | 0.3              | ND            | 0.3            | ND             | 1.4                  | ND      |
| 2.0            | Crescent City/STP Outfall                 | RCM          | 04/09/97    | ND     | ND               | 0.6           | 0.9              | 0.9              | ND            | 0.3            | ND             | 1.9                  | ND      |
| 2.2            | Crescent City Harbor/Inner Jetty           | RCM          | 04/09/97    | ND     | ND               | 0.6           | 0.3              | 0.5              | ND            | 0.3            | ND             | 1.6                  | ND      |
| 3.0            | Crescent City/Control                      | RCM          | 04/10/97    | ND     | 0.2              | 0.2           | ND               | 0.2              | ND            | ND             | 0.4            | ND                  | ND      |
| 100.0          | Mad River Slough                          | OYS          | 04/10/97    | ND     | ND               | 0.3           | ND               | ND               | 0.3           | ND             | ND             | 0.5                  | ND      |
| 101.4          | Arcata Bay/Jolly Giant Slough              | PAC          | 04/18/96    | ND     | ND               | ND            | ND               | ND               | 0.8           | 0.6            | 1.4            | ND                  | ND      |
| 101.8          | Humboldt Bay/Halberson Shoreline           | PAC          | 04/17/96    | ND     | ND               | 0.9           | 0.8              | 0.8              | ND            | 0.9            | ND             | 1.7                  | ND      |
| 101.8          | Humboldt Bay/Halberson Shoreline           | GLY          | 04/17/96    | ND     | 0.1              | 0.2           | ND               | 0.2              | ND            | 0.5            | ND             | 1.4                  | 0.8     |

* RCM = Resident California Mussel  
  OYS = Oyster (*Crassostrea gigas*)  
  TCM = Transplanted California Mussel (a = archive)  
  PAC = Shore Crab (*Pachygrapsus crassipes*)  
  NA = Not Analyzed  
  ND = Not Detected
# APPENDIX M  
## State Mussel Watch Program  
### Summary of 1995–97 Data: Organic Chemicals in Mussel, Oyster, Shore Crab, and Sand Worm (ppb, wet weight)

| Station Number | Station Name | Sample Type | Sample Date | Aldrin | alpha- | cis- | gamma- | trans- | cis- | trans- | Oxy- | Total Chlorpyridone | Chlorpyrifos | Daothal |
|----------------|--------------|-------------|-------------|--------|--------|------|--------|--------|------|--------|------|---------------------|-------------|---------|
| 102.6          | Humboldt Bay/J Street | PAC | 04/17/96 | ND | ND | ND | ND | ND | ND | ND | 1.9 | 1.9 | | ND | ND |
| 102.6          | Humboldt Bay/J Street | RBM | 04/17/96 | ND | ND | ND | ND | ND | ND | ND | ND | | ND | ND |
| 102.6          | Humboldt Bay/J Street | TCM | 04/10/97 | ND | ND | 0.5 | 0.3 | 0.4 | ND | 0.3 | 1.4 | | 2.4 | ND |
| 102.7          | Humboldt Bay/H Street | RBM | 04/17/96 | ND | ND | ND | ND | ND | ND | 0.6 | | 0.6 | ND | ND |
| 103.3          | Humboldt Bay/E Street | TCM | 04/10/97 | ND | ND | 0.4 | ND | ND | ND | ND | ND | 1.6 | | ND |
| 103.5          | Humboldt Bay/Clark Slough | TCM | 04/10/97 | ND | ND | 0.4 | ND | ND | 0.2 | ND | 1.1 | | ND | ND |
| 202.0          | Bodega Head | RCM | 08/29/95 | ND | ND | ND | ND | ND | ND | | ND | ND | | ND |

| Station Number | Diazin | o,p'<br>DDE | p,p'<br>DDE | o,p'<br>DDE | p,p'<br>DDT | p,p'<br>DDT | Total DDT | Di-Chlorobenzophenone | Dieldrin | Endosulfan I | Endosulfan II | Endosulfan sulfate | Total Endosulfan | Endrin | Ethon | Tetra-t | Toxaphene |
|----------------|--------|-------------|-------------|-------------|-------------|-------------|-----------|----------------------|----------|---------------|---------------|------------------|----------------|--------|-------|---------|----------|
| 102.6          | NA | ND | ND | ND | ND | ND | 2.5 | ND | ND | 2.5 | 0.6 | ND | ND | ND | ND |
| 102.6          | NA | ND | ND | ND | ND | ND | 0.5 | ND | ND | 0.5 | 0.8 | ND | ND | ND | ND |
| 102.6          | NA | ND | ND | ND | ND | ND | 0.7 | ND | ND | 0.7 | 0.4 | ND | ND | ND | ND |
| 102.7          | NA | ND | ND | ND | ND | ND | 4.1 | ND | ND | 4.1 | 0.4 | ND | ND | ND | ND |
| 102.7          | NA | ND | ND | ND | ND | ND | 10.9 | ND | ND | 12.2 | 0.4 | ND | ND | ND | ND |
| 102.7          | NA | ND | ND | ND | ND | ND | 3.6 | ND | ND | 3.6 | 0.5 | ND | ND | ND | ND |
| 103.3          | NA | ND | ND | ND | ND | ND | 0.8 | ND | ND | 1.0 | 0.6 | ND | ND | ND | ND |
| 103.5          | NA | ND | ND | ND | ND | ND | 0.6 | ND | ND | 0.6 | 0.5 | ND | ND | ND | ND |
| 202.0          | ND | ND | ND | ND | ND | ND | 1.3 | ND | ND | 1.3 | 0.4 | ND | ND | ND | ND |
| 202.0          | ND | ND | ND | ND | ND | ND | 0.9 | ND | ND | 0.9 | 0.6 | ND | ND | ND | ND |

* RCM = Resident California Mussel  
OYS = Oyster (*Crassostrea gigas*)  
RBM = Resident Bay Mussel (s = small size)  
GTY = Sand Worm (*Glycera spp.*)  
TCM = Transplanted California Mussel (a = archive)  
PAC = Shore Crab (*Pachygrapsus crassipes*)  
RBC = Not Analyzed  
ND = Not Detected
## APPENDIX M

### State Mussel Watch Program

**Summary of 1995-97 Data: Organic Chemicals in Mussel, Oyster, Shore Crab, and Sand Worm (ppb, wet weight)**

| Station Number | Station Name                                | Sample Type | Sample Date | Aldrin | alpha-Chlordane | cis-Chlordane | gamma-Chlordane | trans-Chlordane | cis-Nonachlor | trans-Nonachlor | Oxy-Chlordane | Total Chlorpyrifos | Dacthal |
|----------------|---------------------------------------------|-------------|-------------|--------|-----------------|---------------|-----------------|----------------|---------------|----------------|---------------|-------------------|---------|
| 205.0          | Bodega Harbor/Spud Point Marina             | TCM         | 03/21/97    | ND     | 0.2             | 0.6           | 0.2             | 0.4            | ND            | 0.3            | ND             | 1.6               | ND      |
| 205.1          | Bodega Bay/Porto Bodega                     | RBM         | 03/21/97    | ND     | ND              | 0.3           | ND              | 0.3            | ND            | 0.2            | ND             | 0.8               | ND      |
| 205.3          | Bodega Bay/Mason's Marina                   | TCM         | 03/21/97    | ND     | ND              | 0.3           | ND              | 0.2            | ND            | ND             | 0.5            | ND                 | ND      |
| 205.5          | Bodega Bay/Back Marsh                       | RBM         | 03/21/97    | ND     | ND              | 0.1           | ND              | 0.1            | ND            | ND             | 0.2            | ND                 | ND      |
| 280.0          | Russian River/S Goat Rock                   | RCM         | 03/21/97    | ND     | ND              | 0.5           | ND              | 0.3            | ND            | ND             | 1.0            | ND                 | ND      |
| 307.0          | San Francisco Bay/Treasure Is              | TCM-a       | 01/26/81    | 0.3    | 3.4             | 0.4           | 3.2             | 1.3            | 2.5           | ND             | 11.0           | ND                 | 0.3     |
| 307.0          | San Francisco Bay/Treasure Is              | TCM-a       | 02/02/82    | 0.3    | 3.0             | 0.3           | 2.5             | 1.1            | 2.0           | ND             | 9.3            | ND                 | ND      |
| 308.0          | San Francisco Bay/Hunter's Point            | TCM-a       | 01/26/81    | ND     | 0.2             | 3.7           | 0.3             | 3.2            | 1.3           | 1.9            | 0.2             | 10.7               | ND      |
| 309.0          | San Francisco Bay/near Redwood Cr          | TCM-a       | 02/09/81    | ND     | 0.2             | 3.8           | 0.3             | 3.1            | 1.4           | 2.6            | 0.2             | 11.5               | ND      |
| 313.0          | San Francisco Bay/near Redwood Cr          | TCM-a       | 01/26/81    | 0.3    | 5.4             | 0.2           | 4.7             | 1.8            | 3.3           | 1.3            | 16.0           | ND                 | 0.5     |

| Station Number | Diazinon | o,p'-DDD | p,p'-DDD | o,p'-DDE | p,p'-DDT | Total DDT | Di-Chlorobenzophene | Dieldrin | Endosulfan I | Endosulfan II | Endosulfan Sulfate | Total Endosulfan |
|----------------|----------|----------|----------|----------|----------|-----------|---------------------|----------|---------------|---------------|-------------------|------------------|
| 205.0          | ND       | ND       | ND       | ND       | ND       | 1.5       | 0.4                 | ND       | ND            | ND            | ND                | ND               |
| 205.1          | ND       | ND       | ND       | ND       | ND       | 2.1       | ND                 | ND       | ND            | ND            | ND                | ND               |
| 205.3          | ND       | ND       | ND       | ND       | ND       | 1.6       | ND                 | ND       | ND            | ND            | ND                | ND               |
| 205.5          | ND       | ND       | ND       | ND       | ND       | 0.5       | ND                 | ND       | ND            | ND            | ND                | ND               |
| 280.0          | ND       | ND       | ND       | ND       | ND       | 1.7       | ND                 | ND       | ND            | ND            | ND                | ND               |
| 307.0          | ND       | 2.6      | 8.7      | 0.6      | 8.4      | 0.6       | 1.4                 | ND       | 4.3           | 0.1           | 0.1               | ND               |
| 307.0          | ND       | 2.0      | 6.2      | 0.8      | 6.2      | 0.8       | 1.7                 | 1.5      | 18.8          | ND             | 5.9               | 0.5              |
| 308.0          | ND       | 2.0      | 5.5      | ND       | 7.5      | ND       | 1.5                 | 1.4      | 18.0          | ND             | 7.3               | 0.3              |
| 309.0          | ND       | 1.3      | 3.7      | ND       | 5.8      | ND       | 0.9                 | 13.2     | 8.3           | ND             | 0.3               | ND               |
| 313.0          | ND       | 1.4      | 3.6      | ND       | 6.2      | ND       | 1.7                 | 1.2      | 14.1          | ND             | 10.9              | 0.4              |

| Station Number | alpha-HCH | beta-HCH | delta-HCH | gamma-HCH | Lindane | Heptachlor | Heptachlor-epoxide | Hexachlorobenzene | Methoxychlor | Ethylparathion | Methylparathion | Oxadiazone | PCB | PCB | PCB | Total PCB | PCT | Tetradifon | Toxa-phenol |
|----------------|-----------|----------|-----------|-----------|---------|-----------|--------------------|-------------------|--------------|----------------|----------------|------------|-----|-----|-----|----------|-----|------------|------------|
| 205.0          | ND        | ND       | ND        | ND        | ND      | 0.2       | ND                 | ND               | ND          | ND             | ND             | 8.6        | 2.1 | 21.7 | 10.7 | NA       | ND  | ND         | ND         |
| 205.1          | ND        | ND       | ND        | ND        | ND      | ND        | ND                 | ND               | ND          | ND             | ND             | 13.4       | 13.4 | ND   | ND   | ND       | ND  | ND         | ND         |
| 205.3          | ND        | ND       | ND        | ND        | ND      | ND        | ND                 | ND               | ND          | ND             | ND             | ND          | ND   | ND   | ND   | ND       | ND  | ND         | ND         |
| 205.5          | ND        | ND       | ND        | ND        | ND      | ND        | ND                 | ND               | ND          | ND             | ND             | ND          | ND   | ND   | ND   | ND       | ND  | ND         | ND         |
| 280.0          | ND        | 0.2      | ND        | ND        | ND      | ND        | ND                 | ND               | ND          | ND             | ND             | ND          | ND   | ND   | ND   | ND       | ND  | ND         | ND         |
| 307.0          | ND        | 0.4      | ND        | 0.4      | ND      | 0.1      | ND                 | ND               | ND          | ND             | 17.9          | 75.2       | 3.7  | 96.7 | ND   | 15.3     |
| 307.0          | ND        | 0.5      | ND        | 0.4      | ND      | 0.3      | ND                 | ND               | ND          | ND             | 16.9          | 64.6       | 2.9  | 84.5 | NA   | 25.7     |
| 308.0          | ND        | 0.3      | ND        | 0.2      | ND      | 0.2      | ND                 | ND               | ND          | ND             | 10.1          | 57.0       | 4.3  | 71.4 | NA   | 17.8     |
| 309.0          | ND        | 0.3      | ND        | 0.4      | ND      | 0.3      | ND                 | ND               | ND          | ND             | 9.3           | 47.3       | 4.3  | 60.9 | NA   | 14.9     |
| 313.0          | ND        | 0.3      | ND        | 0.5      | ND      | 0.3      | 0.2                | ND               | ND          | ND             | 9.1           | 51.1       | 3.7  | 63.9 | NA   | 17.6     |

* RCM = Resident California Mussel  
  OYS = Oyster (Crassostrea gigas)  
  GLY = Sand Worm (Glycera spp.)  
  RCM-a = Archive  
  PAC = Shore Crab (Pachygrapsus crassipes)  

---

* ND = Not Detected  
* NA = Not Analyzed
# APPENDIX M

## State Mussel Watch Program

Summary of 1995-97 Data: Organic Chemicals in Mussel, Oyster, Shore Crab, and Sand Worm (ppb, wet weight)

| Station Number | Station Name | Sample Type* | Sample Date | Aldrin | alpha- | cis- | gamma- | trans- | cis- | trans- | Oxy- | Total | Chlor- | Dacthal |
|----------------|--------------|--------------|-------------|--------|-------|------|--------|--------|------|--------|------|-------|--------|---------|
| 321.0          | Dumbarton Bridge/Channel Marker 14 | TCM-a | 02/09/81 | 0.9 | 0.5 | 6.3 | 0.6 | 5.0 | 2.3 | 4.0 | 0.2 | 18.9 | ND | 1.3 |
| 400.6          | Santa Cruz/Natural Bridges | RCM | 06/09/97 | ND | ND | 0.8 | ND | 0.7 | 0.2 | 0.2 | ND | 2.3 | ND | ND |
| 400.7          | Santa Cruz Harbor/Inner | TCM | 03/25/96 | ND | ND | 3.3 | ND | 2.6 | 1.4 | 2.4 | 0.4 | 3.8 | ND | 0.7 |
| 401.0          | Santa Cruz Harbor | TCM | 03/25/96 | ND | ND | 2.4 | ND | 2.0 | 1.1 | 2.0 | 0.2 | 7.7 | ND | ND |
| 403.0          | Elkhorn Slough/Highway 1 Bridge | TCM | 03/12/97 | ND | ND | 1.3 | ND | 1.2 | 0.4 | 0.8 | ND | 3.8 | ND | 0.7 |
| 404.0          | Sandholdt Bridge | TCM | 02/16/96 | ND | ND | 4.7 | ND | 4.0 | 2.3 | 4.1 | ND | 15.1 | 2.0 | 6.6 |
| 404.0          | Sandholdt Bridge | TCM | 03/04/97 | ND | 0.3 | 4.4 | ND | 3.8 | 2.2 | 4.5 | ND | 15.2 | 1.1 | 2.8 |
| 414.0          | Pacific Grove | RCM | 03/07/96 | ND | ND | 0.6 | ND | 0.5 | ND | 0.3 | ND | 1.5 | ND | ND |
| 414.0          | Pacific Grove | RCM | 04/25/97 | ND | ND | 0.3 | ND | ND | ND | 0.2 | ND | 0.5 | ND | 0.3 |
| 601.0          | LA Harbor/National Steel | TCM | 01/18/96 | ND | ND | 2.0 | ND | 1.9 | 1.2 | 1.8 | ND | 6.9 | ND | ND |

| Station Number | Diazinon | o,p' | p,p' | o,p' | p,p' | p,p' | p,p' | Total | Di- | Dieldrin | Endosulfan I | Endosulfan II | Endosulfan sulfate | Total | Endrin | Ethion |
|----------------|----------|------|------|------|------|------|------|-------|-----|----------|---------------|---------------|-------------------|--------|--------|-------|
| 321.0          | ND | 1.7 | 4.5 | ND | 8.2 | ND | 1.8 | 1.3 | 17.5 | ND | 10.4 | 0.7 | ND | 0.4 | 1.1 | 0.4 |
| 400.6          | ND | ND | 1.2 | ND | 9.4 | ND | 3.0 | ND | 13.6 | ND | 2.5 | ND | ND | ND | ND | ND |
| 400.7          | ND | ND | 0.7 | ND | 3.2 | ND | 1.7 | ND | 5.6 | ND | 2.6 | ND | ND | ND | ND | ND |
| 401.0          | ND | ND | 1.2 | ND | 5.4 | ND | 2.3 | ND | 8.9 | ND | 1.3 | ND | ND | ND | ND | ND |
| 403.0          | ND | 1.9 | 5.5 | 0.6 | 40.7 | 4.0 | 12.6 | 1.0 | 66.4 | ND | 7.0 | ND | ND | ND | ND | ND |
| 404.0          | ND | 12.4 | 36.7 | 6.3 | 259.9 | 13.7 | 105.1 | 7.7 | 441.8 | ND | 32.1 | 0.5 | 1.4 | ND | 1.9 | 4.0 |
| 404.0          | ND | 10.4 | 44.5 | 4.4 | 235.5 | 24.8 | 91.1 | 5.1 | 415.8 | ND | 27.6 | 0.3 | 1.3 | ND | 1.6 | 2.2 |
| 414.0          | ND | ND | 0.9 | ND | 6.3 | ND | 1.8 | ND | 9.0 | ND | 1.6 | ND | ND | ND | ND | ND |
| 601.0          | ND | 2.3 | 8.4 | 4.0 | 33.0 | ND | 1.9 | 2.6 | 52.2 | ND | 0.6 | ND | ND | ND | ND | ND |

* RCM = Resident California Mussel  
  RMB = Resident Bay Mussel (s = small size)  
  TCM = Transplanted California Mussel (a = archive)  
  OYS = Oyster (Crassostrea gigas)  
  GLY = Sand Worm (Glycera spp.)  
  PAC = Shore Crab (Pachygrapsus crassipes)  
  ND = Not Analyzed  
  NA = Not Analyzed  
  ND = Not Detected
### APPENDIX M

State Mussel Watch Program

#### Summary of 1995–97 Data: Organic Chemicals in Mussel, Oyster, Shore Crab, and Sand Worm (ppb, wet weight)

| Station Number | Station Name                      | Sample Type | Sample Date | Aldrin | alpha- | cis- | gamma- | trans- | cis- | trans- | Oxy- | Chlorpyrifos |
|---------------|-----------------------------------|-------------|-------------|--------|--------|------|--------|--------|------|--------|------|--------------|
| 601.0         | LA Harbor/National Steel          | TCM         | 01/28/97    | ND     | 0.2    | 1.8  | ND     | 1.4    | 0.7  | 0.9    | ND   | 4.9          |
| 605.0         | LA Harbor/Cabrillo Pier           | TCM         | 01/18/96    | ND     | 0.1    | 2.2  | 0.2    | 2.1    | 1.2  | 2.2    | 0.1  | 8.1          |
| 616.0         | LA Harbor/Consolidated Slip       | TCM         | 01/18/96    | ND     | 0.2    | 2.9  | ND     | 2.4    | 1.3  | 1.9    | ND   | 8.7          |
| 618.0         | LA Harbor/Angels Gate             | RCM         | 01/18/96    | ND     | 2.4    | 0.2  | ND     | 0.8    | ND   | 1.2    | ND   | 7.4          |
| 648.0         | Malibu                            | RBM         | 01/17/96    | ND     | 2.4    | 0.2  | ND     | 2.2    | 0.6  | 2.0    | ND   | 7.4          |
| 648.0         | Malibu                            | RCM         | 11/25/96    | ND     | 2.4    | 0.2  | ND     | 0.8    | ND   | 0.7    | ND   | 2.7          |
| 650.0         | Santa Monica                      | RCM         | 01/18/96    | ND     | 2.4    | 0.2  | ND     | 0.9    | ND   | 0.5    | ND   | 2.6          |

| Station Number | Station Name                      | Sample Type | Sample Date | Diaz- | p,p' | o,p' | p,p' | o,p' | p,p' | p,p' | Total | DDE | Diels | Endosulfan | Ethen |
|---------------|-----------------------------------|-------------|-------------|-------|------|------|------|------|------|------|------|-----|------|------------|-------|
| 601.0         | LA Harbor/National Steel          | TCM         | 01/28/97    | ND    | 1.6   | 5.4  | 2.1  | 31.0  | 0.6  | 2.8  | 2.3  | 45.8 | ND  | 0.8  | ND         | ND    |
| 605.0         | LA Harbor/Cabrillo Pier           | TCM         | 01/18/96    | ND    | 2.2   | 6.6  | 13.6 | 94.2   | 2.0  | 8.7  | 127.2 | ND | 0.7  | ND         | ND    |
| 616.0         | LA Harbor/Consolidated Slip       | TCM         | 01/18/96    | ND    | 2.6   | 9.5  | 2.2  | 23.6   | 2.3  | 1.4  | 41.6  | ND | 0.4  | ND         | ND    |
| 648.0         | Malibu                            | RBM         | 01/17/96    | ND    | 2.4   | 7.9  | 1.0  | 34.0   | 4.9  | 2.2  | 57.8  | ND | 4.7  | ND         | ND    |
| 648.0         | Malibu                            | RCM         | 11/25/96    | ND    | 2.4   | 7.9  | 1.0  | 34.0   | 4.9  | 2.2  | 57.8  | ND | 4.7  | ND         | ND    |
| 650.0         | Santa Monica                      | RCM         | 11/25/96    | ND    | 2.4   | 7.9  | 1.0  | 34.0   | 4.9  | 2.2  | 57.8  | ND | 4.7  | ND         | ND    |
| 662.0         | Royal Palms                       | RCM         | 01/18/96    | ND    | 2.4   | 7.9  | 1.0  | 34.0   | 4.9  | 2.2  | 57.8  | ND | 4.7  | ND         | ND    |

* RCM = Resident California Mussel
* OYS = Oyster (Crassostrea gigas)
* RBM = Resident Bay Mussel (s = small size)
* GLY = Sand Worm (Glycera spp.)
* TCM = Transplanted California Mussel (a = archive)
* PAC = Shore Crab (Pachygrapsus crassipes)

**Note:** NA = Not Analyzed
ND = Not Detected
## APPENDIX M

**State Mussel Watch Program**

Summary of 1995-97 Data: Organic Chemicals in Mussel, Oyster, Shore Crab, and Sand Worm (ppb, wet weight)

| Station Number | Station Name          | Sample Type* | Sample Date | Aldrin | alpha- | cis- | gamma- | trans- | cis- | trans- | Oxy- | Total Chlor- | Chlorpyrifos | Dacthal |
|----------------|-----------------------|--------------|-------------|--------|--------|------|--------|--------|------|--------|------|-------------|-------------|---------|
| 662.0          | Royal Palms           | RCM          | 11/25/96    | ND     | ND     | 0.3  | ND     | 0.4    | ND   | 0.3    | ND   | 1.0         | ND          | ND      |
| 664.0          | Cabrillo Beach        | RCM          | 01/18/96    | ND     | ND     | 0.6  | ND     | 0.6    | ND   | 0.6    | ND   | 1.5         | ND          | ND      |
| 708.0          | Anaheim Bay/Navy Marsh| TCM          | 01/27/97    | ND     | ND     | 2.7  | 1.3    | 1.5    | 0.4  | 1.5    | ND   | 5.0         | ND          | ND      |
| 713.0          | Huntington Harbour/Edinger Street | TCM | 01/17/97 | ND   | ND     | 2.6  | 0.2    | 1.8    | 2.0  | 1.8    | ND   | 6.2         | ND          | ND      |
| 715.0          | Huntington Harbour/Edinger Street | TCM | 01/17/97 | ND   | ND     | 3.7  | 0.2    | 3.0    | 1.2  | 3.0    | ND   | 7.1         | ND          | ND      |
| 723.4          | Newport Bay/Edinger Street | TCM | 01/17/97 | ND   | ND     | 0.3  | 1.1    | 1.2    | 1.0  | 1.2    | ND   | 3.0         | ND          | ND      |
| 724.0          | Newport Bay/Highway 1 Bridge | TCM | 01/17/97 | 0.1   | 0.1   | 1.2   | 0.1   | 1.4   | 1.3   | 1.4   | ND   | 4.8         | ND          | ND      |
| 725.0          | Newport Bay/Crows Nest | TCM          | 01/18/96    | ND     | ND     | 2.9  | 1.1    | 2.0    | 0.4  | 2.0    | ND   | 6.4         | ND          | ND      |

| Station Number | Diaz- | alpha- | beta- | delta- | Hepta- | Hepta- | gamma- | Hepta- | Hexa- | Methoxy- | Ethyl- | Methyl- | Oxa- | PCB | PCB | PCB | Total PCB | PCT | Tetra- | Toxa- |
|----------------|-------|--------|-------|--------|--------|--------|--------|--------|-------|----------|--------|---------|------|-----|-----|-----|-----------|-----|--------|-------|
| 662.0          | ND    | ND     | ND    | ND     | ND     | ND     | ND     | ND     | ND    | ND       | ND     | ND      | ND   | ND  | ND  | ND  | ND         | ND  | ND     | ND    |
| 664.0          | ND    | ND     | ND    | ND     | ND     | ND     | ND     | ND     | ND    | ND       | ND     | ND      | ND   | ND  | ND  | ND  | ND         | ND  | ND     | ND    |
| 708.0          | ND    | ND     | ND    | ND     | ND     | ND     | ND     | ND     | ND    | ND       | ND     | ND      | ND   | ND  | ND  | ND  | ND         | ND  | ND     | ND    |
| 713.0          | ND    | ND     | ND    | ND     | ND     | 0.1    | ND     | ND     | ND    | ND       | ND     | ND      | ND   | ND  | ND  | ND  | ND         | ND  | ND     | ND    |
| 715.0          | ND    | ND     | ND    | ND     | ND     | 0.1    | ND     | ND     | ND    | ND       | ND     | ND      | ND   | ND  | ND  | ND  | ND         | ND  | ND     | ND    |
| 723.4          | ND    | ND     | ND    | ND     | ND     | 0.1    | ND     | ND     | ND    | ND       | ND     | ND      | ND   | ND  | ND  | ND  | ND         | ND  | ND     | ND    |
| 724.0          | ND    | ND     | ND    | ND     | ND     | 0.1    | ND     | ND     | ND    | ND       | ND     | ND      | ND   | ND  | ND  | ND  | ND         | ND  | ND     | ND    |
| 725.0          | ND    | ND     | ND    | ND     | ND     | 0.1    | ND     | ND     | ND    | ND       | ND     | ND      | ND   | ND  | ND  | ND  | ND         | ND  | ND     | ND    |

* RCM = Resident California Mussel
  OYS = Oyster (Crassostrea gigas)
  RBM = Resident Bay Mussel (s = small size)
  GLY = Sand Worm (Glycera spp.)
  TCM = Transplanted California Mussel (s = archive)
  PAC = Shore Crab (Pachygrapsus crassipes)
  *-ND = Not Detected
### APPENDIX M

**State Mussel Watch Program**

**Summary of 1995–97 Data: Organic Chemicals in Mussel, Oyster, Shore Crab, and Sand Worm (ppb, wet weight)**

| Station Number | Station Name          | Sample Type* | Sample Date | Aldrin | alpha-Chlordane | cis-Chlordane | gamma-Chlordane | trans-Chlordane | cis-Nona-chlor | trans-Nona-chlor | Oxy-chlordane | Total Chlorpyrifos | Dacthal |
|----------------|-----------------------|--------------|-------------|--------|-----------------|---------------|-----------------|-----------------|----------------|-----------------|--------------|-------------------|--------|
| 725.0          | Newport Bay/Crows Nest| TCM          | 01/27/97    | ND     | 0.2             | 2.2           | ND              | 1.7             | 1.6            | 1.8             | 0.2          | 7.8               | 1.1    |
| 726.4          | Newport Bay/Rhine Channel/End | TCM | 01/17/96 | ND | ND | 1.4 | 0.1 | 1.0 | 1.4 | 1.4 | 0.2 | 5.4 | ND | ND |
| 726.4          | Newport Bay/Rhine Channel/End | TCM | 01/17/96 | ND | ND | 1.5 | 0.1 | 1.2 | 1.0 | 1.2 | ND | 5.0 | 0.9 | 0.6 |
| 726.6          | Newport Bay/Mariners Drive | TCM | 01/17/96 | ND | ND | 0.2 | 2.0 | 0.1 | 1.6 | 1.0 | 1.8 | ND | 6.7 | 1.4 | 1.0 |
| 740.0          | Dana Point Harbor/Boat Yard | TCM | 01/27/97 | ND | ND | 0.6 | ND | 0.6 | 0.4 | 0.7 | ND | 2.3 | ND | ND |
| 742.0          | San Juan Creek | RCM | 01/18/96 | ND | ND | 0.9 | ND | 0.8 | 0.4 | 1.1 | ND | 3.3 | ND | ND |
| 750.0          | Oceanside | RCM | 01/18/96 | ND | ND | 1.5 | ND | 1.9 | ND | 1.7 | ND | 5.1 | ND | ND |
| 750.0          | Oceanside | RCM | 09/30/96 | ND | ND | 0.4 | ND | 0.3 | ND | 0.4 | ND | 1.0 | ND | ND |
| 882.7          | San Diego Bay/Sampson Street Pier | TCM | 01/18/96 | ND | ND | 0.6 | ND | 0.6 | 0.7 | 0.6 | ND | 2.5 | ND | ND |
| 883.1          | San Diego Bay/Chollas Creek | TCM | 01/18/96 | ND | ND | 1.0 | ND | 1.2 | 1.0 | 1.3 | ND | 4.5 | ND | ND |

| Station Number | Diazalin | o,p' | p,p', o,p' | p,p' | p,p' | p,p' | p,p' | Total DDT | Di-Chlorobenzophenone | Dieldrin | Endosulfan I | Endosulfan II | Endosulfan sulfate | Total Endosulfan |
|----------------|----------|------|------------|------|------|------|------|-----------|-----------------------|----------|--------------|--------------|-------------------|-----------------|
| 725.0          | 1.6      | 5.3  | 0.9        | 47.2 | 0.9  | 3.0  | 2.0  | 60.8      | 2.1                   | ND       | ND           | ND           | ND                | ND              |
| 726.4          | 0.7      | 3.0  | 0.4        | 24.9 | 0.6  | 3.5  | 0.9  | 34.1      | 1.5                   | ND       | ND           | ND           | ND                | ND              |
| 726.6          | 6.3      | 5.5  | 0.8        | 31.3 | 1.5  | 6.7  | 1.4  | 45.4      | 1.8                   | ND       | ND           | ND           | ND                | ND              |
| 740.0          | 0.9      | ND   | 0.8        | 6.1  | ND   | 0.5  | ND   | 7.4       | 0.3                   | 1.0      | ND           | ND           | ND                | ND              |
| 742.0          | 0.8      | ND   | 0.8        | 31.3 | 1.5  | 6.7  | 1.4  | 45.4      | 1.0                   | ND       | ND           | ND           | ND                | ND              |
| 742.0          | 0.8      | ND   | 0.8        | 31.3 | 1.5  | 6.7  | 1.4  | 45.4      | 1.0                   | ND       | ND           | ND           | ND                | ND              |
| 882.7          | 0.5      | ND   | 0.6        | 2.4  | ND   | 0.4  | ND   | 3.4       | 0.2                   | ND       | ND           | ND           | ND                | ND              |

| Station Number | alpha-HCH | beta-HCH | delta-HCH | gamma-HCH | Hepta-chlor | Hepta-epoxide | Hexa-chloro-benzene | Methoxychlor | Ethyl-parathion | Methyl-parathion | Oxi-diazon | PCB 1248 | PCB 1254 | PCB 1260 | Total PCB | PC 5460 | Tetradifon | Toxadiphene |
|----------------|-----------|----------|-----------|-----------|-------------|---------------|---------------------|-------------|-----------------|-----------------|-----------|---------|---------|---------|----------|---------|----------|-----------|
| 725.0          | ND        | ND       | ND        | ND        | ND          | ND            | ND                  | ND          | 1.5             | 23.1           | 106.3     | 2.3     | 131.7   | ND      | 23.3    |
| 726.4          | ND        | ND       | ND        | ND        | ND          | ND            | ND                  | ND          | 0.2             | 10.1           | 91.9      | 9.7     | 102.0   | ND      | 23.5    |
| 726.4          | ND        | ND       | ND        | ND        | ND          | ND            | ND                  | ND          | 2.1             | 9.5            | 46.8      | 1.0     | 57.4    | ND      | 23.5    |
| 726.6          | ND        | ND       | ND        | ND        | ND          | ND            | ND                  | ND          | 4.6             | 10.4           | 7.6       | ND      | 10.4    | ND      | 31.9    |
| 740.0          | ND        | ND       | ND        | ND        | ND          | ND            | ND                  | ND          | 0.8             | 7.6            | ND        | ND      | 7.6     | ND      | 10.4    |
| 742.0          | ND        | ND       | ND        | ND        | ND          | ND            | ND                  | ND          | 4.9             | ND             | 9.7       | ND      | 4.9     | ND      | 9.7     |
| 750.0          | ND        | 0.4      | ND        | ND        | ND          | ND            | ND                  | ND          | 4.5             | ND             | 9.7       | ND      | 4.5     | ND      | 9.7     |
| 882.7          | 0.5       | 0.5      | ND        | ND        | ND          | ND            | ND                  | ND          | 90.9            | ND             | 90.9      | ND      | 90.9    | ND      | 90.9    |
| 883.1          | 1.0       | ND       | ND        | ND        | ND          | ND            | ND                  | ND          | 38.7            | ND             | 38.7      | ND      | 38.7    | ND      | 38.7    |

* RCM = Resident California Mussel
* OYS = Oyster (*Crassostrea gigas*)
* RBM = Resident Bay Mussel (s = small size)
* GLY = Sand Worm (*Glycera spp.*)
* TCM = Transplanted California Mussel (a = archive)
* PAC = Shore Crab (*Pachygrapsus crassipes*)

NA = Not Analyzed
ND = Not Detected
### APPENDIX M

**State Mussel Watch Program**

Summary of 1995-97 Data: Organic Chemicals in Mussel, Oyster, Shore Crab, and Sand Worm (ppb, wet weight)

| Station Number | Station Name               | Sample Type* | Sample Date | Aldrin alpha- | cis- | gamma- | trans- | cis- | trans- | Oxy- | Total Chlor- | Chlor- pyrifos |
|----------------|----------------------------|--------------|-------------|---------------|-----|-------|-------|-----|-------|-----|-------------|---------------|
|                |                            |              |             | chlor- dene   |     |       |       |     |       |     |             |               |
|                |                            |              |             |               |     |       |       |     |       |     |             |               |
|                |                            |              |             |               |     |       |       |     |       |     |             |               |
| 883.1          | San Diego Bay/Chollas Creek | TCM          | 01/28/97    | ND            | 0.2 | 2.2   | 0.1   | 2.0 | 1.1   | 1.6 | ND          | 7.2           |
| 883.2          | San Diego Bay/Chollas Creek/Mouth | TCM        | 01/28/97    | ND            | 0.2 | 1.8   | 1.4   | 1.1 | 1.4   | 1.4 | ND          | 5.9           |
| 883.3          | San Diego Bay/Chollas Creek/End | TCM          | 01/28/97    | ND            | 0.4 | 4.4   | 0.3   | 3.6 | 2.1   | 3.6 | 0.1        | 14.5          |
| 883.5          | San Diego Bay/Tuna Docks    | TCM          | 01/28/97    | ND            | 0.1 | 1.5   | 1.4   | 0.9 | 0.9   | 0.9 | ND          | 4.8           |
| 883.6          | San Diego Bay/7th Street Channel | TCM          | 01/28/97    | ND            | 0.2 | 1.7   | 1.0   | 0.8 | 1.1   | 1.1 | ND          | 3.9           |
| 883.8          | San Diego Bay/Switzer Creek | TCM          | 01/28/97    | ND            | 0.4 | 2.7   | 0.3   | 2.7 | 1.6   | 2.7 | ND          | 10.4          |
| 883.8          | San Diego Bay/7th Street Channel | TCM          | 01/28/97    | ND            | 0.4 | 2.7   | 0.3   | 2.7 | 1.6   | 2.7 | ND          | 10.4          |

| Station Number | Station Name               | Sample Type* | Sample Date | Diaz- o,p' DDD | p,p' DDE | o,p' DDT | p,p' DDT | p,p' DDMU | Total DDT | Di- Chloro-Benzophenone | Dieldrin | Endo- sulfan I | Endo- sulfan II | Endo- sulfan sulfate | Total Endo- sulfan | Endrin | Ethion |
|----------------|----------------------------|--------------|-------------|---------------|---------|---------|---------|----------|----------|-------------------------|----------|------------------|------------------|---------------------|-------------------|--------|--------|
|                |                            |              |             |               |         |         |         |          |          |                         |          |                  |                  |                     |                   |        |        |
| 883.1          | ND                         | ND           | 0.7        | ND            | 2.9     | ND      | 1.2     | ND       | 4.8      | ND          | 0.5      | ND    | ND    | ND    | ND      |
| 883.2          | ND                         | ND           | 0.8        | ND            | 4.4     | ND      | 1.1     | ND       | 6.3      | ND          | 0.6      | ND    | ND    | ND    | ND      |
| 883.3          | ND                         | ND           | 1.2        | ND            | 4.5     | 0.5     | 2.7     | ND       | 8.8      | ND          | 1.5      | ND    | ND    | ND    | ND      |
| 883.5          | ND                         | ND           | 1.1        | ND            | 4.1     | ND      | 1.1     | ND       | 6.3      | ND          | 0.5      | ND    | ND    | ND    | ND      |
| 883.6          | ND                         | ND           | 0.8        | ND            | 2.5     | ND      | 0.8     | ND       | 4.0      | ND          | 0.5      | ND    | ND    | ND    | ND      |
| 883.8          | ND                         | ND           | 0.5        | ND            | 1.5     | ND      | 1.0     | ND       | 3.1      | ND          | 0.6      | ND    | ND    | ND    | ND      |
| 885.1          | 1.5                        | 3.2          | 7.1        | 0.6          | 3.9     | ND      | 13.9    | ND       | 13.9     | ND          | 0.9      | ND    | ND    | ND    | ND      |
| 885.3          | 1.3                        | 2.2          | 7.8        | 1.1          | 0.7     | 13.2    | ND      | 0.9      | ND       | ND          | ND       | ND    | ND    | ND    | ND      |

| Station Number | Station Name               | Sample Type* | Sample Date | alpha- HCH | beta- HCH | delta- HCH (Lindane) | gamma- HCH | Hepta- chlor | Hepta- chlor- epoxide | Hexa- chlor- benzene | Methoxy- chlor | Ethyl- parathion | Methyl- parathion | Oxa- diazon | PCB 1248 | PCB 1254 | PCB 1260 | Total PCB | PCT 5460 | Tetra- dion | Toxa- phene |
|----------------|----------------------------|--------------|-------------|-----------|-----------|---------------------|------------|-------------|----------------------|---------------------|--------------|----------------|----------------|------------|-----------|----------|----------|------------|------------|-----------|-----------|
| 883.1          | ND                         | ND           | ND         | ND        | ND        | ND                  | ND         | ND          | ND                   | ND                  | ND           | ND             | ND             | ND         | ND        | ND       | ND       | ND         | ND         | ND        | ND        | ND        |
| 883.2          | ND                         | ND           | ND         | ND        | ND        | ND                  | ND         | ND          | ND                   | ND                  | ND           | ND             | ND             | ND         | ND        | ND       | ND       | ND         | ND         | ND        | ND        | ND        |
| 883.3          | ND                         | ND           | ND         | ND        | ND        | ND                  | ND         | ND          | ND                   | ND                  | ND           | ND             | ND             | ND         | ND        | ND       | ND       | ND         | ND         | ND        | ND        | ND        |
| 883.5          | ND                         | ND           | ND         | ND        | ND        | ND                  | ND         | ND          | ND                   | ND                  | ND           | ND             | ND             | ND         | ND        | ND       | ND       | ND         | ND         | ND        | ND        | ND        |
| 883.6          | ND                         | ND           | ND         | ND        | ND        | ND                  | ND         | ND          | ND                   | ND                  | ND           | ND             | ND             | ND         | ND        | ND       | ND       | ND         | ND         | ND        | ND        | ND        |
| 883.8          | ND                         | ND           | ND         | ND        | ND        | ND                  | ND         | ND          | ND                   | ND                  | ND           | ND             | ND             | ND         | ND        | ND       | ND       | ND         | ND         | ND        | ND        | ND        |
| 885.1          | ND                         | ND           | ND         | ND        | ND        | ND                  | ND         | ND          | ND                   | ND                  | ND           | ND             | ND             | ND         | ND        | ND       | ND       | ND         | ND         | ND        | ND        | ND        |
| 885.3          | ND                         | ND           | ND         | ND        | ND        | ND                  | ND         | ND          | ND                   | ND                  | ND           | ND             | ND             | ND         | ND        | ND       | ND       | ND         | ND         | ND        | ND        | ND        |

* RCM = Resident California Mussel
* OYS = Oyster (Crassostrea gigas)
* RBM = Resident Bay Mussel (s = small size)
* GLY = Sand Worm (Glycera spp.)
* TCM = Transplanted California Mussel (a = archive)
* PAC = Shore Crab (Pachygrapsus crassipes)

**ND** = Not Detected
**NA** = Not Analyzed

**B** = Base
**H** = High
APPENDIX M

State Mussel Watch Program

Summary of 1995–97 Data: Organic Chemicals in Mussel, Oyster, Shore Crab, and Sand Worm (ppb, wet weight)

| Station Number | Station Name                      | Sample Type* | Sample Date       | Aldrin | alpha- | cis- | gamma- | trans- | cis- | trans- | Oxy- | Total | Chlor- | Dacthal |
|----------------|-----------------------------------|--------------|------------------|--------|--------|-------|--------|--------|-------|--------|-------|--------|--------|--------|
| 886.0          | San Diego Bay/NASSCO              | TCM          | 01/18/96         | ND     | ND     | 1.1   | ND     | 0.9    | 0.9   | 1.0    | ND    | 3.9    | ND     | ND     |
| 888.0          | San Diego Bay/Coronado Bridge     | RBM          | 01/28/97         | ND     | ND     | 0.7   | ND     | 0.6    | 0.6   | 0.7    | ND    | 2.6    | ND     | 0.2    |
| 893.0          | San Diego Bay/Laurel Street       | TCM          | 01/18/96         | ND     | ND     | 2.1   | ND     | 2.0    | 1.3   | 1.9    | ND    | 7.2    | ND     | ND     |
| 893.5          | San Diego Bay/B Street Pier       | TCM          | 01/18/96         | ND     | ND     | 1.2   | ND     | 1.0    | 0.9   | 1.0    | ND    | 4.1    | ND     | ND     |
| 894.0          | SD Bay/ Harbor Is/E Basin/Storm Dr| TCM          | 01/28/97         | ND     | 0.4    | 2.8   | 0.9    | 2.5    | 0.9   | 1.7    | ND    | 9.3    | ND     | 0.4    |

| Station Number | Diaz-| o,p'  | p,p'  | o,p'  | p,p'  | p,p'  | Total | Di- | Dieldrin | Endo- | Endo- | Endo- | Total | Endrin | Ethion |
|----------------|------|-------|-------|-------|-------|-------|-------|-----|----------|-------|-------|-------|-------|--------|--------|
| 886.0          | ND   | 0.8   | ND    | 3.4   | ND    | 0.7   | ND    | 4.9 | ND       | ND    | ND    | ND    | ND    | ND     | ND     |
| 888.0          | ND   | 0.5   | ND    | 2.2   | ND    | 0.7   | ND    | 3.4  | ND       | ND    | ND    | ND    | ND    | ND     | ND     |
| 893.0          | ND   | 1.1   | ND    | 3.7   | ND    | 0.7   | ND    | 5.5  | ND       | ND    | ND    | ND    | ND    | ND     | ND     |
| 893.5          | ND   | 1.2   | ND    | 4.9   | ND    | 0.7   | ND    | 6.8  | ND       | ND    | ND    | ND    | ND    | ND     | ND     |
| 894.0          | ND   | 7.3   | 22.9  | 3.7   | 1.5   | 0.7   | 1.9   | 37.1 | ND       | ND    | ND    | ND    | ND    | ND     | ND     |

| Station Number | alpha- | beta- | delta- | gamma- | Hepta- | Hexa- | Methoxy- | Ethyl- | Methyl- | Oxa- | PCB  | PCB  | PCB  | Total | PCT  | Tetra- |
|----------------|--------|-------|--------|--------|--------|-------|----------|--------|--------|------|------|------|------|-------|------|--------|
| 886.0          | ND     | 0.5   | ND     | ND     | ND     | ND    | ND       | ND     | ND     | ND   | 59.5 | 59.5 | NA   | ND     | ND     |
| 888.0          | ND     | ND    | ND     | ND     | ND     | ND    | ND       | ND     | ND     | ND   | 0.6  | 12.2 | 35.1 | 1.4   | 48.7  | NA     |
| 893.0          | ND     | ND    | ND     | ND     | ND     | ND    | ND       | ND     | ND     | ND   | 1.4  | 14.4 | 96.7 | ND    | 111.1  | NA     |
| 893.5          | ND     | ND    | ND     | ND     | ND     | ND    | ND       | ND     | ND     | ND   | 2.7  | 5617.2| 1082.5| 41.9  | 6741.6 | NA     |
| 894.0          | ND     | ND    | ND     | ND     | ND     | 0.2   | ND       | ND     | ND     | ND   | 2.7  | 5617.2| 1082.5| 41.9  | 6741.6 | NA     |

* RCM = Resident California Mussel
* RBM = Resident Bay Mussel (s = small size)
* TCM = Transplanted California Mussel (a = archive)

OYS = Oyster (Crassostrea gigas)
GLY = Sand Worm (Glycera spp.)
PAC = Shore Crab (Pachygrapsus crassipes)

* ND = Not Detected
NA = Not Analogized
*