

**IMC Chemicals**

IMC Chemicals Inc.

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January 24, 2003

Kai Dunn, Ph.D.  
California Regional Water Quality Control Board  
Lahontan Region  
15428 Civic Drive, Suite 100  
Victorville, CA 92392

Dear Dr. Dunn:

**Subject: ACL Order No. R6V-2002-0025, Item 3.B.  
Effectiveness of the Brackish Water Pool**

This report satisfies the requirement for Item 3.B. of the California Regional Water Quality Control Board's Administrative Civil Liability Order No. R6V-2002-0025. Item 3.B. requires IMC Chemicals (IMCC) to evaluate the effectiveness of the brackish water bird pool at Searles Dry Lake. The data presented in this report is derived from the International Bird Rescue Research Center's (IBRRC) daily activity logs for the Trona site during 610 days beginning May 1, 2001 and ending December 31, 2002. During the period, IBRRC observed approximately thirty-seven species of birds at the pool at various times on 553 days. Nearly all of those species were also observed in other areas at Searles Dry Lake; however, fifty-eight additional species were observed in areas at Searles Dry Lake, but not at the bird pool.

IMCC tallied the number of days that different bird species were observed at the bird pool. Unquestionably, shorebirds such as avocets, sandpipers, plovers, and stilts were most commonly present at the bird pool, on some days in large numbers. By contrast, the number of other species of birds observed at the pool generally ranged from zero to one or two. However, there were about ten days when three to eight non-shorebirds were observed at the pool in one day.

The data in Table 1 compares the number of days a bird species was observed at the bird pool versus the number of days that IBRRC picked up a bird of that species somewhere else in Searles Valley. The table also indicates the number of days that IBRRC observed that species in the vicinity of Searles Dry Lake at any location other than the bird pool. One could derive from the table that in most cases a relatively small percentage of birds that pass through Searles Valley use the bird pool. In a few cases, it appeared that the same bird remained at the pool for a number of days. A graph is enclosed for each species, which shows the number of days the species was observed at the pool and the number of days IBRRC picked up a bird of that species elsewhere within Searles Valley. The table does not include the number of birds of each species observed or picked up on any given day.

Table 1.

Species	Days Species Observed at Pool	Days Species Picked Up	Days Observed at locations other than the Pool
American Pipit	1	0	10
American Widgeon	13	2	17
Avocet	139	5	335
Baird's Sandpiper	2	1	15
Blue-Winged Teal	6	61	27
Bufflehead	13	24	9
Canvasback	3	0	9
Cinnamon Teal	9	31	39
Double-crested Cormorant	1	4	7
Duck Species	52	46	97
Eared Grebe	30	47	91
Godwit	1	1	4
Goose Species	1	10	13
Green-winged Teal	7	8	17
Gull Species	17	14	209
Heron	1	2	24
Hooded Merganser	1	0	3
American Kestrel	1	0	1
Killdeer	5	0	254
Least Sandpiper	6	2	167
Lesser Scaup	1	18	10
Mallard	54	67	98
Northern Shoveler	1	8	33
Pied-billed Grebe	14	66	23
Pintail	1	11	33
Redhead	73	18	19
Ringed-neck Duck	1	5	6
Ruddy Duck	15	31	29
Say's Pheobe	1	1	1
Scaup	6	11	6
Snowy Plover	1	0	215
Swallow	1	15	5
Teal	3	21	52
Turkey Vulture	1	0	0
Western Sandpiper	15	3	98
Willet	1	0	19
Wilson's Phalarope	8	0	12

The Table 2 shows the bird species that IBRRC observed in areas around Searles Valley, but did not observe at the bird pool.

Table 2.

Species	Number of Days Observed at Searles Dry Lake
American Bittern	1
American Coot	7
Belted Kingfisher	7
Black-bellied Plover	7
Black-crowned Heron	1
Black-legged Kittiwake	1
Black-necked Stilt	20
Caspian Tern	2
Cattle Egret	3
Clark's Grebe	2
Common Egret	13
Common Loon	1
Common Merganser	1
Common Sandpiper*	3
Curlew Sandpiper*	2
Dove	Observation not noted, but IBRRC retrieved on six days.
Dowitcher Species*	1
Dunlin*	2
Egret	1
Flycatcher Species	2
Forrester Tern	1
Gadwall	25
Goldeneye	1
Great Egret	17
Greater Scaup	1
Greater Yellowlegs*	4
Grebe	3
Black-headed Grosbeak	Observation not noted, but IBRRC retrieved on one day.
Horned Grebe	2
Horned Lark	1
Hummingbird	Observation not noted, but IBRRC retrieved on one day.
Lesser Yellowlegs*	1
Meadowlark	6

Species	Number of Days Observed at Searles Dry Lake
Merganser	1
Northern Flicker	1
Northern Harrier	2
Osprey	1
Pacific Loon	Observation not noted, but IBRRC retrieved on one day.
Phalarope Species*	5
Rail	Observation not noted, but IBRRC retrieved on one day.
Raven	Observation not noted, but IBRRC retrieved on two days.
Red-tailed Hawk	3
Red-breasted Merganser	1
Red-necked Phalarope*	9
Red-throated Loon	Observation not noted, but IBRRC retrieved on one day.
Ross's Goose	1
Sanderling*	2
Semipalmated Plover	10
Semipalmated Sandpiper*	4
Short-billed Dowitcher*	7
Snipe*	1
Snowy Egret	4
Song Sparrow	1
Spotted Sandpiper*	22
Spotted Towhee	1
Tern	1
Warbler	1
Violet-green Swallow	2
Western Empidonax	Observation not noted, but IBRRC retrieved on four days.
Western Grebe	18
Western Tanager	Observation not noted, but IBRRC retrieved on five days.
Whimbrel*	3
White Pelican	34
White-faced Ibis	25
Widgeon	2
Wood Duck	1
Yellowlegs*	5
Yellow-headed Blackbird	4
*All asterisks indicate Sandpiper Species	

Of the approximately 700 birds picked up during the May 2001 to December 2002 time period, about 60% of the birds were found dead or died after being picked up. Of course, IBRRC only picks up live birds when they are in distress, so the bird rescue program is credited for saving the 40% of birds that survived after being picked up. It is difficult to measure how effective the brackish water pool is as a rest and re-hydration stop for birds. When non-shorebirds were observed at the pool, there were only one or two of them per day at the pool on all but about ten days. A larger number and a greater variety of birds were observed around Searles Dry Lake than were observed at the pool.

IMCC has no way of knowing the fate of the birds that use the pool, whether they fly safely away from Searles Valley, or ultimately land elsewhere in a state of distress. The pool likely keeps more shorebirds in Searles Valley because the pool discharge extends the shallow brackish water area in which they thrive. However, before the pool was built, some shorebirds frequented and thrived in the brackish seeps around the western shore of the lakebed.

Please let me know if you have any questions regarding this report. I can be reached by telephone at 760-372-2881 or by e-mail at [kirchner@nachem.com](mailto:kirchner@nachem.com).

Sincerely,

  
Denise Kirchner

Enclosures

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