

Table 1. Information retrieved from the 11 projects that resulted in unavoidable impacts to coral reef ecosystems in the Pacific Islands.

Project Number	Project Name	Location ¹²	Island	Corps Civil Works (CCW) or Permit Projects (Permit No.)	Est. 1st Date Project Planning	Est. Finish Date	Compensatory Mitigation Recommended ¹³	Project Impacts		Compensatory Mitigation Implemented	Impacted Resources Assessed
								Direct Impacts In Acres	Estimated Indirect Impacts in Acres (Total Acres)		
1	Ofu-Olosega bridge ¹	AS	Manu'a	PODCO-0 1493-S	1978	1980	Y	1.5	1.5 (3)	N	N
2	Ammo Wharf Relocation ²	GU	Guam	PODCO-0 1636-SD	1981	1984	Y	7.4	7.3 (14.7)	Y (7.4 acres)	N
3	West Beach swim lagoons ³	HI	Oahu	PODCO-O 1512	1982	1987	Y	1.3	0 (1.3)	N	N
4	Kaneohe Bay Yacht Club ⁴	HI	Oahu	PODCO-O 1925 S	1986	1987	Y	6.8	0 (6.8)	Y (6.8 acres)	N
5	Kwajalein Atoll causeway ⁵	RMI	Kwajalein	PODCO-0 1763 SD	1983	1987	Y	44	0 (44)	Y (44 acres)	N
6	Saipan harbor ⁶	CNMI	Saipan	PODCO-0 1992-SD	1989	1993	Y	105	0 (105)	Y (105 acres)	N
7	Outer Cove Marina harbor ⁷	CNMI	Saipan	PODCO GIN94-010	1994	1996	Y	3.5	5 (8.5)	Y (3.5 acres)	N
8	Piti Underwater Observatory ⁸	GU	Guam	PODCO-O 1947	1986	1996	Y	4.4	0.6 (5)	Y (4.4 acres)	N
9	Kawaihae small boat harbor ⁹	HI	Hawaii	CCW	1971	1996	Y	4.5	0 (4.5)	Y (4.5 acres)	Y (4.5 acres)
10	Kaneohe Marine Corps drain ¹⁰	HI	Oahu		1996	1998	Y	0.1	0 (0.1)	Y (0.1 acres)	N
11	Piti cable landing ¹¹	GU	Guam		2000	2001	Y	0.1	0.3 (0.4)	Y (0.1 acres)	N
Totals							11	178.6	14.7 (193.3)	9 (175.8 acres)	1 (4.5 acres)

¹ U.S. Army Corps of Engineers, 2000; Environmental Service, 2001.

² VTN Pacific, 1983; U.S. Navy 1984a,b; U.S. Fish and Wildlife Service 1986a,b; U.S. Fish and Wildlife Service, 1988a,b.

³ Environmental Communications, 1985; U.S. Army Corps of Engineers, 1986; DLNR, 1986.

⁴ Kolinski and Jokiel, 1996; Kaneohe Yacht Club, 1997.

⁵ U.S. Army Corps of Engineers, 1986a; U.S. Department of Commerce, 1986; U.S. Army Corps of Engineers, 1986b.

⁶ U.S. Fish and Wildlife Service, 1988b; CNMI Division of Fish and Wildlife, 2000; U.S. Army Corp of Engineers, 1989.

⁷ U.S. Army Corps of Engineers, 1999; Micronesian Environmental Service 1997a; Micronesian Environmental Service 1997b; Cheenis Pacific Company, 1996.

⁸ Pacific Basin Environmental Consultants, 1995a,b,c,d,e,f; Pacific Basin Environmental Consultants, 1996.

⁹ U.S. Fish and Wildlife Service, 1993; Jokiel et al., 1995; Jokiel et al., 1999.

¹⁰ U.S. Navy, 1997; Marine Research Consultants, 1999a, b,c,d,e,f.

¹¹ U.S. Army Corps of Engineers, 2000; Environmental Services, 2001; Kolinski, 2002.

¹² AS = American Samoa, CNMI = Commonwealth of the Northern Mariana Islands
FSM = Federated States of the Marshall Islands, GU = Guam, HI = Hawaiian Islands,
RMI = Republic of the Marshall Islands

¹³ Y = Yes, N= No

Table 1 Continued

Project Name	Compensatory Mitigation Correlated with Impacts	Performance Standard Written for Mitigation	Compensatory Mitigation Validly Monitored	Survival of Transplanted Coral	Effective Compensatory Mitigation
Ofu-Olosega bridge	N	N	N		N
Ammo Wharf Relocation	N	N	Y (7.4 acres)		? (7.4 acres)
West Beach swim lagoons	N	N	N		N
Kaneohe Bay Yacht Club	N	N	Y (6.8 acres)	94%	Y (6.8 acres)
Kwajalein Atoll causeway	N	N	N		?
Saipan harbor	N	N	Y (105 acres)		Y (105 acres)
Outer Cove Marina harbor	N	N	N		?
Piti Underwater Observatory	N	Y (4.4 acres)	Y (4.4 acres)	97%	Y (4.4 acres)
Kawaihae small boat harbor	N	N	Y (4.5 acres)	Overall 33%	N
Kaneohe Marine Corps drain	N	N	Y (0.1 acres)	Near 98%	Y (0.1 acres)
Piti cable landing	N	Y (0.1 acres)	Y (0.1 acres)	90 %	?
	0	2 (4.5 acres)	7 (128.3 acres)		4 (116.3 acres)