

# APPENDIX B—STRATEGIC FORCES ASSUMED

The strategic forces assumed to be available for an early to mid-1980's conflict between the United States and the Soviet Union are derived from open-source estimates of weapons characteristics and force levels. Generally, the forces are assumed to be within SALT I I established limits and assume the completion of ongoing intercontinental ballistic missile (ICBM) modernization programs of both superpowers. For the United States this means that yield and accuracy improvements for the MM I I I force are carried out. On the Soviet side, it means completing the deployment of their fourth-generation ICBMS, the SS-17, SS-18, and SS-19.

A recent study conducted by the Congressional Budget Office, entitled, "Counterforce Issues for the U.S. Strategic Nuclear Forces," provided table B-1, which shows Soviet forces and their capabilities for the early to mid-1980's.

Western estimates differ as to the exact attributes and capabilities of Soviet strategic systems. As a result some of the assumptions used in the studies drawn on for this report are mutually inconsistent. This would be an impor-

tant factor in an analysis of relative U.S. and Soviet military effectiveness, where the outcomes of a study would be very sensitive to the exact technical data used. In a study of the impacts of nuclear war on civilian population, however, a slight difference in the estimated yield or accuracy of a Soviet weapon will have no corresponding effect on the computation of the consequences of a given attack, relative to the degree of uncertainty that already exists in the prediction of those consequences.

U.S. estimates, on the other hand, are not subject to such great uncertainties. The Congressional Budget Office summary of U.S. forces is shown in table B-2.

It is useful to bear in mind that Soviet ICBM warheads are much higher in yield than their U.S. counterparts. While this has only a marginal impact on relative capabilities to destroy civilian targets on purpose, it means that Soviet attacks on U.S. targets will produce much more collateral damage (i.e. population casualties from attacks on economic targets, or economic and population damage from attacks on military targets) than will U.S. attacks on Soviet targets.

**Table B-1 .—Estimated Soviet Strategic Nuclear Forces, 1985**

Launcher	Number <sup>a</sup>	Warheads per launcher <sup>b</sup>	Total warheads	Yield in megatons <sup>c</sup>	Total megatons	Equivalent megatons
SS-11 . . . . .	330	1	330	1.5	495	432
SS-17 . . . . .	200	4	800	0.6	480	560
SS-18 . . . . .	308	8	2,464	1.5	3,696	3,228
SS-19 . . . . .	500	6	3,000	0.8	2,400	2,580
SS-16 . . . . .	60	1	60	1.0	60	60
<b>Total ICBMs . . . . .</b>	<b>1,398</b>		<b>6,654</b>		<b>7,131</b>	<b>6,860</b>
SS-N-6 . . . . .	600	1	600	1.0	600	600
SS-N-8 . . . . .						
SS-N-17 . . . . .						
SS-N-18 . . . . .						
<b>Total SLBMs . . . . .</b>	<b>900</b>		<b>1,500</b>		<b>780</b>	<b>906</b>
Bear. . . . .	100	1	100	20	2,000	740
Bison . . . . .					200	116
(Backfire). . . . .	(250)	(2)	(500)	(0.2)	(100)	(170)
<b>Total bombers . . . . .</b>	<b>140</b>		<b>140</b>		<b>2,200</b>	<b>856</b>
	(390)		(640)		(2,300)	(1,026)
<b>Grand total</b>	<b>2,438</b>		<b>8,294</b>		<b>10,111</b>	<b>8,622</b>
	(2,688)		(8,794)		(10,211)	(8,792)

SOURCE: Counterforce Issues for the U.S. Strategic Nuclear Forces. Congressional Budget Office, January 1978

Table B-2.—Estimated U.S. Strategic Nuclear Forces, 1985

Launcher	Number	Warheads per launcher	(Mid-1980's force)		
			Total warheads	Yield in megatons	Equivalent megatons
Minuteman II . . . . .	450	1	450	1.0	450.0
Minuteman III . . . . .	550	3	1,650	0.17	280.5
(with MK-12A) . . . . .	(550)	3)	(1,650)	(0.35)	(572.5)
Titan II . . . . .	54	1	54	9.0	486.0
Total ICBMs.	1,054		2,154		1,216.5
					(1,508.5)
Poseidon . . . . .	336	0	3,360	0.04	134
Poseidon C-4 . . . . .	160	8	1,280	0.10	128
Trident I . . . . .	240	8	1,920	0.10	192
Total SLBMs . . . . .	736		6,560		454
B-52 G/H . . . . .	165	} 6 SRAM 4 bombs	990	0.2	198
B-52CM . . . . .	165		20 ALCM	660	1.0
FB-111, . . . . .	60	} 2 SRAM 2 bombs	3,300	0.2	660
			120	0.2	24
			120	1.0	120
Total bombers . . . . .	390		5,190		1,662
Grand total . . . . .	2,180		13,904		3,332.5
					(3,629.5)
					(4,894)

SOURCE: Counterforce Issues for the U.S. Strategic Nuclear Forces, Congressional Budget Office, January 1978.

Which weapons would be used in our attack cases? In Case 1, Detroit is targeted with a single warhead similar to those deployed on the multiple independently targetable reentry vehicle (MIRVed) SS-18 ICBM or with a large single weapon such as those carried by SS-9 or SS-18 Soviet ICBMs. Leningrad is targeted with yields approximately those of a Minuteman II warhead, a Titan II warhead, and all 10 reentry vehicles (RVs) from a Poseidon submarine-

launched ballistic missiles (SLBM). In Case 2, the U.S.S.R. attacks U.S. refinery targets with 10 MIRVed SS-18, warheads, and the United States attacks Soviet targets with a mix of Poseidons and Minuteman III, numbering 73 warheads. In Case 3, each side uses its most accurate MIRVed ICBMs against the other side's silos, and a mix of ICBMs, SLBMs, and bombers against bomber and missile submarine bases.