ORDER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

7110.66C

2/25/05

SUBJ: **NATIONAL BEACON CODE ALLOCATION PLAN (NBCAP)**

1. PURPOSE. This order prescribes the procedures and the functional responsibilities for the use of Mode 3/A of the Air Traffic Control Radar Beacon System (ATCRBS). It applies to all Air Traffic Control (ATC) facilities that provide services in United States (U.S.) domestic or oceanic airspace.

2. DISTRIBUTION. This order is distributed to select offices in Washington Headquarters, Service Area Directorates, the William J. Hughes Technical Center, the Mike Monroney Aeronautical Center, all air traffic control facilities, all flight standards and international aviation field offices.

3. CANCELLATION. Order 7110.66B, National Beacon Code Allocation Plan, dated February 3, 1999, is canceled.

4. EXPLANATION OF CHANGES. This revision delegates and reassigns NBCAP responsibilities. Certain terms and procedures were changed or deleted. Primary responsibility for assigning ARTCC codes and international coordination was transferred from the Service Area Directorates to the national level. A third level of priority, tertiary codes, was added to en route automation processing to prevent the assignment of nondiscrete beacon codes due to an Air Route Traffic Control Center exhausting its assignment. These assignments are listed in Appendix 1 of this order and should be implemented as soon as practicable. Service Area Directorates may not assign codes to terminal facilities or for special use from the internal center blocks without headquarters approval.

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5. DEFINITIONS.

a. Beacon Code Assignment is the actual distribution of specific codes from within the National Beacon Code Allocation to specific facilities and/or special activities.

b. Beacon Code Set is comprised of 4096 possible codes (0000-7777). The Beacon Code Set uses 4 octal digits in which the numbers "8" and "9" are not used.

c. Code Block is a group of codes designated for a specific purpose and may be a subset(s), or parts thereof.

d. Code Subset is a series of beacon codes consisting of a nondiscrete (i.e., ##00) followed by 63 discrete codes (e.g., 2000, 2001, 2002,2077). The entire subset will be identified by using the four digits of the nondiscrete code (e.g., 2100 = 2100-2177).

e. Computer Assigned Code is a beacon code assigned to a specific flight plan as the result of a program function or a controller message input.

f. Defense Visual Flight Rules (DVFR) are defined in 14 CFR Part 99 for flights operating in an Air Defense Identification Zone (ADIZ) under visual flight rules (VFR) in accordance with CFR Part 91.

g. Discrete Codes are beacon codes that do not end in the numerals "00" (e.g., 0101, 5520, 6421). There are 4032 discrete codes.

h. External Code is a beacon code reserved for computer assignment to a flight plan with one or more route segments not contained within a single domestic ARTCC's airspace.

i. Function Codes are nondiscrete beacon codes utilized in accordance with FAA Order 7110.65, Air Traffic Control, Chapter 5, Section 2.

j. Internal Code is a beacon code reserved for computer assignment to a flight plan where all route segments are contained in a single domestic ARTCC's airspace.

k. National Beacon Code Allocation is the designation of specific beacon codes and beacon code subsets for the specific purposes defined in Appendix 1.

l. Nondiscrete Codes are beacon codes that end in the numerals "00" (e.g., 0100, 1200). There are 64 nondiscrete codes.

m. Primary Code Block consists of a block of codes in an ARTCC's computer from which code assignments are first attempted. Blocks may be adapted for internal or external code assignment to flight plans.

n. Secondary Code Block consists of a block of codes in an ARTCC's computer from which code assignment is attempted only when all discrete codes in the primary code block are not available. Blocks may be adapted for internal or external code assignment to flight plans.

o. Tertiary Code Block consists of a block of codes in an ARTCC's computer from which code assignment is attempted when no codes from the primary or secondary code blocks are available. Blocks may be adapted for internal or external code assignment to flight plans.

6. **CONCEPT.**

a. The primary goal is to efficiently manage the beacon code set as a limited National Airspace System (NAS) resource. The NBCAP is based upon the concept of discrete beacon code assignments to each ARTCC so that codes can be adapted and assigned by a computer to a flight plan according to a specific procedure. Ideally, each ARTCC should be allocated enough exclusive code blocks so that each aircraft could be given a computer assigned unique discrete code which would not be duplicated anywhere in the NAS. The intent would thereby, allow all aircraft to proceed from departure to destination using the same discrete code. Unfortunately, duplicate computer code assignments are unavoidable because of the limited number of code subsets available, the number of ARTCC's, and the volume of traffic. To minimize the impact of duplicate computer assignments, careful analysis of code utilization statistics is required to ensure appropriate facility assignments. Therefore, ARTCC facility assignments are managed from the national level.

b. Terminal, industry, unique purpose, or experimental activity beacon code assignments are made from the allocation in Appendix 1 managed by the Service Area Directorates. If additional codes are needed, or reassignment of codes necessary, the En Route and Oceanic Safety and Operations Support Directorate will assign them to the Service Area Directorates from the available ARTCC subsets.

c. Every effort will be made to comply with International Civil Aviation Organization (ICAO) beacon code assignment procedures.

7. **RESPONSIBILITIES.**

a. The En Route and Oceanic Safety and Operations Support Directorate shall:

(1) Make and manage all National Beacon Code Allocations.

(2) Make all Service Area code assignments beyond those delegated in this order.

(3) Make all ARTCC beacon code assignments.

(4) Review Service Area Directorate supplements and audit beacon code assignments as necessary.

(5) Respond to Service Area Directorate requests to support terminal, industry, unique purpose or experimental activity needs.

(6) Coordinate facility beacon code assignments with international air traffic service providers with assistance from the Service Area Directorates.

(7) Provide assistance to the Service Area Directorates with coordination of beacon code assignments with non-FAA agencies such as the DOD and the US Customs Service.

b. Service Area Directorates shall:

(1) Assist the En Route and Oceanic Safety and Operations Support Directorate with the execution of this order.

(2) Manage all Service Area Directorate beacon code assignments delegated in this order.

(3) Develop a Service Area Directorate supplement to this order, and specify the designated use of beacon code assignments made by the Service Area Directorate. Include in the supplement a current record of all IFR and VFR code blocks assigned to each terminal, flight service facility, or unique purpose, along with the specific use or function of each code block. For those Service Area Directorates whose area of responsibility includes or is adjacent to an ADIZ, include codes assigned for identification of aircraft on DVFR flight plans. Document any restrictions and/or agreements on beacon code assignments or adaptation in the supplement. Update the Service Area Directorate supplement as needed and forward a copy to the En Route and Oceanic Safety and Operations Support Directorate for review.

(4) Coordinate with other Service Area Directorates to prevent beacon code assignment conflicts between adjacent terminal/flight service facilities. Service Area Directorates with facilities

that border international boundaries will assist En Route and Oceanic Safety and Operations Support Directorate to ensure coordination with adjacent international facilities (such as Canadian, Mexican, Bahamian, and Cuban) is accomplished, as appropriate.

c. Air Traffic Control (ATC) Facilities shall:

(1) Ensure that code usage is in compliance with the ARTCC and Service Area Directorate's beacon code assignments.

(2) Adjust appropriate computer parameters to optimize code-use times.

(3) Forward to the Service Area Directorate all requests for additional code assignments accompanied by the justification specified in paragraph 9, Justification Requirements, below. Ensure that requests for dedicated codes to a specific function or to be used for a unique purpose is done sparingly since this will limit the overall number of codes available for general use. Examples of unique purposes include: VFR traffic penetrating Class B airspace, and practice instrument approaches.

8. **CODE ASSIGNMENTS.** Beacon code assignments shall be made from the allocations in Appendix 1:

a. ARTCC. The En Route and Oceanic Safety and Operations Support Directorate shall assign internal and external center code blocks.

b. CERAP, Terminal, FSS/AFSS, Industry, Unique Purpose, or Experimental Activities shall be assigned by the Service Area Directorates and documented in the Service Area Directorate supplement.

c. Military. As allocated in this order and specified in FAAO 7610.4. Additional DOD requirements shall be forwarded to En Route And Oceanic Safety And Operations Support Directorate.

9. JUSTIFICATION REQUIREMENTS.

a. ARTCC's shall submit all requests for additional beacon codes through their Service Area Directorate to the En Route and Oceanic Safety and Operations Support Directorate. These requests will be evaluated using existing code utilization statistics.

b. Terminal/AFSS/CERAP shall forward requests to their Service Area Directorate with supporting documentation, which must include quantifiable justification such as traffic count or projected peaks.

c. Industry/Unique Purpose/Experimental Activities/Customers shall submit a detailed letter to the facility or the Service Area Directorate with supporting documentation, to indicate intended use, safety considerations, duration needed, and impact if not approved.

Luis A. Ramirez
Director of En Route and Oceanic
Safety and Operations Support

APPENDIX 1. NATIONAL BEACON CODE ALLOCATIONS

Table 1-1 National Allocations

0100-0400	Allocated to the Area Operations Directorates for assignment for use by Terminal/FSS/CERAP/Industry/Unique Purpose/Experimental Activities.
1200	Visual Flight Rule (VFR) aircraft not in radio contact with an ATC facility
1201-1272	Discrete 1200 series codes, unless otherwise allocated (i.e. 1236, 1255), may be designated by Area Operations Directorates for DVFR aircraft.
1236	Reserved in accordance with FAA Order 7110.52
1255	Fire fighting aircraft not in contact with an ATC facility
1273-1275	Calibration performance monitoring equipment (CPME) "Parrot" transponders
1276	Air Defense Identification Zone (ADIZ) penetration when unable to establish communication with ATC or aeronautical facility
1277	Designated search and rescue (SAR) aircraft
0100-0700, 1000, 1100, 1300, 1500, 2000*, 2100, 2200, 2300, 2400, 2500, 4000	Non-discrete code assignments in accordance with FAA Order 7110.65, Chapter 5, Section 2 *Also for use in oceanic airspace, unless another code is assigned by ATC
4400	SR-71, F-12, U-2, B-57, pressure suit flights and flights, and aircraft operations above FL600 in accordance with FAA Order 7110.65, Chapter 5, Section 2
4401-4433	Reserved in accordance with FAA Order 7110.67
4434-4437	Weather reconnaissance, as appropriate
4440-4441	Operations above FL600 for Lockheed/NASA from Moffett Field
4442-4446	Operations above FL600 for Lockheed from Air Force Plant 42
4447-4452	Operations above FL600 for SR71/U2 operations from Edwards AFB
4453	High Balloon operations - National Scientific Balloon Facility, Palestine TX, and other providers, some in international operations.
4454-4477	Air Force operations above FL600 as designated in FAA Order 7610.4
5000	Reserved for use by DOD
5100-5300	May be used by DOD aircraft beyond radar coverage but inside U.S. controlled airspace with coordination as appropriate with applicable Area Operations Directorate. Any codes used by DOD aircraft outside U.S. controlled airspace need to be coordinated with the applicable flight information region(s) (Firs) air traffic authorities
5400, 6100, 6400	Reserved for use by DOD
7500	Allocated in accordance with FAA Orders 7110.49 and 7110.65
7600	Radio Failure in accordance with FAA Order 7110.65
7700	Emergency in accordance with FAA Order 7110.65
7777	DOD interceptor aircraft on active air defense missions and operating without ATC clearance
0500, 0600, 0700, 1000, 1100, 1300, 1400, 1500, 1600, 1700, 2000, 2100, 2200, 2300, 2400, 2500, 2600, 2700, 3000, 3100, 3200, 3300, 3400, 3500, 3600, 3700, 4000, 4100, 5600, 5700, 6000, 6200, 6300, 6500, 6600, 6700, 7000, 7100, 7200, 7300, 7400	External ARTCC subsets (Discrete codes of blocks only, except for first primary block)
0000, 4200, 4300, 4500, 4600, 4700, 5100, 5200, 5300, 5500	Internal ARTCC subsets (Discrete codes of blocks only, except for first primary block)

APPENDIX 1. NATIONAL BEACON CODE ALLOCATIONS

Table 1-2 ARTCC Code Categories

I	**Internal Departures**
E	**External Departures**
M	**Military**
S	**Special Use**

Table 1-3 ARTCC Computer Adaptation Sequence

P	**Primary Code Block**
S	**Secondary Code Block**
T	**Tertiary Code Block**
(AAn)	**Adaptation Sequence (Priority)**

Table 1-4 ARTCC Assignments

ARTCC	Code	Thru	Code	Priority
KZAK	1100			ODAPS
KZWY	1000			ODAPS
ZAB	0700			EP-1
ZAB	2600			EP-2
ZAB	4100			ES-1
ZAB	1500			ES-2
ZAB	1600			ES-3
ZAB	7001	-	7020	ET-1
ZAB	3001	-	3020	ET-2
ZAB	6024	-	6047	ET-3
ZAB	5601	-	5621	ET-4
ZAB	3101	-	3134	ET-5
ZAB	3501	-	3515	ET-6
ZAB	4200			IP-1
ZAB	4300			IP-2
ZAB	5500			IS-1
ZAN	3400			E
ZAN	4100			E
ZAN	5700			E
ZAN	6200			E
ZAN	7200			E
ZAN	7400			E
ZAN	4000			ES

APPENDIX 1. NATIONAL BEACON CODE ALLOCATIONS

ARTCC	Code	Thru	Code	Priority
ZAN	5600			ES
ZAN	2200			I
ZAN	2300			I
ZAN	2500			I
ZAN	4200			I
ZAN	4500			I
ZAN	4600			I
ZAN	4700			I
ZAN	5100			I
ZAN	5200			I
ZAN	5500			I M
ZAN	6300			I M
ZAN	3100			IS
ZAN	3500			IS
ZAU	1300			EP-1
ZAU	6200			EP-2
ZAU	6500			EP-3
ZAU	3100			EP-4
ZAU	3500			ES-1
ZAU	3200			ES-2
ZAU	5600			ES-3
ZAU	7200			ES-4
ZAU	2200			ET-1
ZAU	0500			ET-2
ZAU	4300			IP-1
ZAU	5300			IP-2
ZAU	5500			IS-1
ZAU	4700			IS-2
ZAU	0000			IS-3
ZBW	3400			EP-1
ZBW	3500			EP-2
ZBW	7300			ES-1
ZBW	2000			ES-2
ZBW	1400			ES-3
ZBW	1300			ES-4
ZBW	7000			ET-1
ZBW	2400			ET-2
ZBW	4600			IP-1
ZBW	5300			IS-1

APPENDIX 1. NATIONAL BEACON CODE ALLOCATIONS

ARTCC	Code	Thru	Code	Priority
ZBW	5500			IS-2
ZBW	4700			IS-3
ZBW	0000			IS-4
ZDC	7000			EP-1
ZDC	3600			EP-2
ZDC	0500			EP-3
ZDC	5600			EP-4
ZDC	2100			EP-5
ZDC	2400			EP-6
ZDC	1300			ES-1
ZDC	6500			ES-2
ZDC	6200			ES-3
ZDC	3500			ET-1
ZDC	3700			ET-2
ZDC	4600			IP-1
ZDC	5300			IP-2
ZDC	5500			IS-1
ZDC	0000			IS-2
ZDC	4700			IS-3
ZDV	1400			EP-1
ZDV	0600			ES-1
ZDV	2700			ES-2
ZDV	6500			ES-3
ZDV	3700			ES-4
ZDV	7441	-	7453	ET-1
ZDV	2212	-	2235	ET-2
ZDV	3401	-	3427	ET-3
ZDV	6644	-	6655	ET-4
ZDV	5622	-	5642	ET-5
ZDV	3333	-	3377	ET-6
ZDV	5100			IP-1
ZDV	5500			IS-1
ZDV	4300			IS-2
ZDV	0000			IS-3
ZFW	2200			EP-1
ZFW	2300			EP-2
ZFW	0500			EP-3
ZFW	3400			ES-1
ZFW	6200			ES-2
ZFW	3600			ES-3

APPENDIX 1. NATIONAL BEACON CODE ALLOCATIONS

ARTCC	Code	Thru	Code	Priority
ZFW	0613	-	0677	ET-1
ZFW	7041	-	7077	ET-2
ZFW	3021	-	3077	ET-3
ZFW	3241	-	3264	ET-4
ZFW	5100			IP-1
ZFW	5200			IP-2
ZFW	5300			IS-1
ZFW	4500			IS-2
ZHU	2400			EP-1
ZHU	2500			EP-2
ZHU	7400			ES-1
ZHU	7300			ES-2
ZHU	4000			ES-3
ZHU	2700			ES-4
ZHU	7200			ES-5
ZHU	6700			ET-1
ZHU	6600			ET-2
ZHU	4500			IP-1
ZHU	4600			IP-2
ZHU	4700			IP-3
ZHU	0000			IT-1
ZHU	5100			IT-2
ZHU	4200			S
ZHU	4300			S
ZID	6600			EP-1
ZID	6700			EP-2
ZID	4000			EP-3
ZID	3700			ES-1
ZID	3400			ES-2
ZID	1400			ES-3
ZID	7300			ES-4
ZID	2701	-	2735	ET-1
ZID	3001	-	3042	ET-2
ZID	2601	-	2642	ET-3
ZID	4200			IP-1
ZID	4500			IP-2
ZID	5500			IS-1
ZJX	1000			EP-1
ZJX	0700			EP-2

APPENDIX 1. NATIONAL BEACON CODE ALLOCATIONS

ARTCC	Code	Thru	Code	Priority
ZJX	2600			EP-3
ZJX	3000			ES-1
ZJX	3200			ES-2
ZJX	6200			ES-3
ZJX	1500			ES-4
ZJX	1600			ES-5
ZJX	7300			ES-6
ZJX	0600			ET-1
ZJX	2700			ET-2
ZJX	6700			ET-3
ZJX	6500			ET-4
ZJX	4200			IP-1
ZJX	5500			IP-2
ZJX	4300			IS-1
ZJX	7400			IS-2**
ZKC	2100			EP-1
ZKC	1100			EP-2
ZKC	1700			EP-3
ZKC	5700			ES-1
ZKC	2500			ES-2
ZKC	7401	-	7440	ET-1
ZKC	2001	-	2020	ET-2
ZKC	3301	-	3311	ET-3
ZKC	7101	-	7120	ET-4
ZKC	6001	-	6023	ET-5
ZKC	4600			IP-1
ZKC	4700			IP-2
ZKC	5200			IS-1
ZLA	7200			EP-1
ZLA	7300			EP-2
ZLA	1000			EP-3
ZLA	6700			ES-1
ZLA	2000			ES-2
ZLA	1300			ES-3
ZLA	5700			ET-1
ZLA	7100			ET-2
ZLA	7021	-	7053	ET-3
ZLA	4600			IP-1
ZLA	4700			IP-2
ZLA	5300			IS-1

APPENDIX 1. NATIONAL BEACON CODE ALLOCATIONS

ARTCC	Code	Thru	Code	Priority
ZLA	5100			IS-2
ZLC	6000			EP-1
ZLC	0500			ES-1
ZLC	3100			ES-2
ZLC	4000			ES-3
ZLC	7401	-	7411	ET-1
ZLC	2201	-	2211	ET-2
ZLC	2501	-	2512	ET-3
ZLC	4101	-	4121	ET-4
ZLC	0701	-	0730	ET-5
ZLC	5601	-	5611	ET-6
ZLC	2301	-	2311	ET-7
ZLC	6201	-	6211	ET-9
ZLC	4300			IP-1
ZLC	5300			IS-1
ZLC	5200			IS-2
ZLC	4200			IS-3
ZMA	3600			EP-1
ZMA	3700			EP-2
ZMA	1400			EP-3
ZMA	2300			ES-1
ZMA	2100			ES-2
ZMA	1100			ES-3
ZMA	3500			ES-4
ZMA	5700			ES-5
ZMA	1300			ES-6
ZMA	3300			ES-7
ZMA	6600			ES-8
ZMA	6000			ES-9
ZMA	0500			ET-1
ZMA	2200			ET-2
ZMA	5600			ET-3
ZMA	7400			ET-4
ZMA	4600			IP-1
ZMA	4700			IP-2
ZMA	4500			IP-3
ZMA	0000			IP-4
ZMA	5300			IS-1
ZMA	5100			IS-2

APPENDIX 1. NATIONAL BEACON CODE ALLOCATIONS

ARTCC	Code	Thru	Code	Priority
ZMA	4200			IS-3
ZME	1500			EP-1
ZME	5600			EP-2
ZME	1600			EP-3
ZME	0700			ES-1
ZME	1000			ES-2
ZME	1300			ES-3
ZME	0611	-	0612	ET-1
ZME	0651	-	0662	ET-2
ZME	7001	-	7040	ET-3
ZME	3043	-	3060	ET-4
ZME	3201	-	3240	ET-5
ZME	2643	-	2677	ET-6
ZME	4300			IP-1
ZME	5500			IP-2
ZME	5300			IS-1
ZME	4500			IS-2
ZMP	2400			EP-1
ZMP	2600			EP-2
ZMP	3600			EP-3
ZMP	3000			ES-1
ZMP	7000			ES-2
ZMP	6300			ES-3
ZMP	6700			ET-1
ZMP	3312	-	3332	ET-2
ZMP	1501	-	1532	ET-3
ZMP	4200			IP-1
ZMP	4500			IP-2
ZMP	4600			IS-1
ZMP	5200			IS-2
ZNY	1600			EP-1
ZNY	1700			EP-2
ZNY	2700			EP-3
ZNY	3000			EP-4
ZNY	3300			EP-5
ZNY	2600			EP-6
ZNY	1500			EP-7
ZNY	7100			EP-8
ZNY	1100			EP-9
ZNY	6600			ES-1

APPENDIX 1. NATIONAL BEACON CODE ALLOCATIONS

ARTCC	Code	Thru	Code	Priority
ZNY	2300			ES-2
ZNY	4000			ES-3
ZNY	1000			ES-4
ZNY	6725	-	6777	ET-1
ZNY	2200			ET-2
ZNY	4200			IP-1
ZNY	4500			IP-2
ZNY	4700			IS-1
ZOA	3200			EP-1
ZOA	3300			EP-2
ZOA	1700			ES-1
ZOA	6300			ES-2
ZOA	3600			ES-3
ZOA	3700			ES-4
ZOA	0601	-	0647	ET-1
ZOA	2212	-	2235	ET-2
ZOA	7001	-	7020	ET-3
ZOA	7054	-	7077	ET-4
ZOA	7441	-	7464	ET-5
ZOA	3001	-	3020	ET-6
ZOA	4200			IP-1
ZOA	4500			IP-2
ZOA	4300			IS-1
ZOA	5500			IS-2
ZOA	7000			IS-3
ZOB	5700			EP-1
ZOB	4100			EP-2
ZOB	7400			EP-3
ZOB	0700			EP-4
ZOB	6000			ES-1
ZOB	2500			ES-2
ZOB	1000			ES-3
ZOB	2100			ES-4
ZOB	7200			ES-5
ZOB	2300			ES-6
ZOB	0600			ET-1
ZOB	6300			ET-2
ZOB	5100			IP-1
ZOB	5200			IP-2