

also apply to EPA where the Agency is the permitting authority of record.

## II. Description of Action

### *What Is the Purpose of This Notice?*

The EPA is, by this notice, providing a list of State and local jurisdictions where EPA assumed responsibility to issue permits, effective as of December 1, 2001. The EPA received submittals of part 70 operating permits programs from all 52 State and territorial agencies and all 60 local programs. The EPA has granted full approvals to all of the operating permits programs except Connecticut and Maryland. As a result, EPA expects that the impact of the Federal operating permits program rule will be minimal. The EPA is working with the affected States in an effort to fully approve a State program before significant resources must be expended.

### *Will Some Pollution Sources Be Required To Prepare New Permit Applications?*

Yes. Section 71.5(a)(1) of part 71 provides that a timely application is one that is submitted within 12 months or an earlier date after a source that does not have an operating permit issued by a State under the State's part 70 program becomes subject to the part 71 program. Because part 71 for these two State jurisdictions was effective on December 1, 2001, such sources are required to submit part 71 permit applications no later than December 1, 2002. Sources required to submit applications earlier than 12 months will be notified in advance by the permitting authority (whether it is EPA or a State in the case of a delegated part 71 program) and given a reasonable time to submit their applications. In general, this notice shall not be given less than 180 days in advance of the deadline for submittal of the application.

## III. List of States and Local Jurisdictions

### *Which State and Local Jurisdictions Became Subject to a Federal Operating Permits Program on December 1, 2001?*

Connecticut: The EPA's Region I proposed full approval of the State's program on August 13, 2001. See 66 FR 42496. However, EPA is unable to take final action on this proposal because Connecticut's interim approval expired on December 1, 2001, and the necessary corrections to the State's program will not become effective until early 2002. Until Connecticut's program receives final full approval, part 71 is effective in the State.

Maryland: Maryland acknowledged that it would not have in place by

December 1, 2001 law to unambiguously provide standing for judicial review of the permits consistent with the Act and 40 CFR part 70. Therefore, on December 1, 2001, Maryland lost its interim approval status of its part 70 permitting program. See 66 FR 63236 (December 5, 2001) for further details.

The Office of Management and Budget has exempted this action informing the public of a Federal air quality permitting program, as outlined above, from Executive Order 12688 review. This notice is issued under the authority of sections 101, 110, 112 and 301 of the Act as amended (42 U.S.C. 7401, 7410, 7412, 7601).

Dated: January 30, 2002.

**John S. Seitz,**

*Director, Office of Air Quality Planning and Standards.*

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## FEDERAL COMMUNICATIONS COMMISSION

### 47 CFR Parts 2, 27 and 73

[GN Docket No. 01-74; FCC 01-364]

### Reallocation and Service Rules for the 698-746 MHz Spectrum Band (Television Channels 52-59)

**AGENCY:** Federal Communications Commission.

**ACTION:** Final rule.

**SUMMARY:** In this document, the Commission adopts allocation and service rules for the 698-746 MHz spectrum band (Lower 700 MHz Band), which is being reallocated pursuant to statutory requirements. The Commission takes these actions to support the development of new services in the Lower 700 MHz Band, and to protect existing television operations that will occupy the band throughout the transition to digital television.

**DATES:** Effective April 8, 2002 except for § 27.50(c)(5) which contains information collection that has not been approved by the Office of Management Budget (OMB). The Commission will publish a document in the **Federal Register** announcing the effective date of that section.

**FOR FURTHER INFORMATION CONTACT:** Jamison Prime, Office of Engineering and Technology, at (202) 418-2472 or Michael Rowan, Wireless Telecommunications Bureau, at (202) 418-7240.

**SUPPLEMENTARY INFORMATION:** This is a summary of the Federal

Communications Commission's *Report and Order (R&O)*, FCC 01-364, in GN Docket No. 01-74, adopted on December 12, 2001 and released on January 18, 2002. The full text of this *R&O* is available for inspection and copying during normal business hours in the FCC Reference Information Center, 445 12th Street, SW., Room CY-A257, Washington, DC 20554. The complete text may be purchased from the Commission's duplicating contractor, Qualex International, 445 12th Street, SW., Room CY-B402, Washington, DC 20554, (202) 863-2893. The complete text may also be downloaded at: [www.fcc.gov](http://www.fcc.gov).

## Synopsis of R&O

In the *R&O*, the Commission: (1) Reallocates the entire 48 megahertz of spectrum in the Lower 700 MHz Band to the fixed and mobile services while retaining the existing broadcast allocation; (2) establishes technical criteria designed to protect television (TV) operations during the digital television (DTV) transition period; (3) allows low power television (LPTV) and TV translator stations to retain secondary status and operate in the band after the transition; (4) sets forth a mechanism by which pending broadcast applications may be amended to provide analog or digital service in the core television spectrum or to provide digital service on TV Channels 52-58; (5) divides the 48 megahertz of reallocated spectrum into three 12-megahertz blocks, with each block consisting of a pair of 6-megahertz segments, and two 6-megahertz blocks of contiguous, unpaired spectrum; (6) licenses the two six-megahertz blocks of contiguous unpaired spectrum and two of the three 12-megahertz blocks of paired spectrum over six Economic Area Groupings (EAGs) and the remaining 12-megahertz block of paired spectrum over 734 Metropolitan Statistical Areas (MSAs) and Rural Service Areas (RSAs); (7) provides for a 50 kW effective radiated power (ERP) power limit for the Lower 700 MHz Band to permit both wireless services and certain new broadcast operations; and (8) establishes competitive bidding procedures and voluntary band-clearing mechanisms for the Lower 700 MHz Band.

## I. Background

1. In the *Notice of Proposed Rulemaking (NPRM)* (66 FR 19106, April 13, 2001) in this proceeding, the Commission proposed to reallocate and adopt service rules for the Lower 700 MHz Band as part of the ongoing conversion to DTV broadcasting. Because DTV technology is more

spectrally efficient than the current analog standard, the same amount of television service can operate in a reduced allocation. 47 U.S.C. 309(j)(14) requires the Commission to assign spectrum recovered from broadcast television using competitive bidding, and envisions that the Commission will conduct an auction of this spectrum by September 30, 2002. The statute further requires analog broadcasters to cease operation in the recovered spectrum by the end of 2006 unless the Commission extends the end of the transition. As provided in the statute, the Commission is required to extend the end of the transition at the request of individual broadcast licensees on a market-by-market basis if one or more of the four largest networking stations or affiliates are not broadcasting in digital, digital-to-analog converter technology is not generally available, or 15 percent or more television households are not receiving a digital signal. While the end of the DTV transition is targeted for the end of 2006, the statute anticipates that the Commission will reclaim excess television spectrum by September 30, 2002. Therefore, the auction for this spectrum will occur a number of years in advance of the end of the digital transition.

2. The Commission previously determined that television operations can be relocated to a core spectrum (TV Channels 2–51), which will make existing broadcast spectrum on TV Channels 52–69 available for reallocation. The Commission previously reallocated TV Channels 60–69 (Upper 700 MHz Band). In this *R&O*, the Commission adopts a flexible allocation for the Lower 700 MHz Band that will allow service providers to select the technology they wish to use to provide new services that the market may demand. At the same time, it takes steps to protect incumbent broadcasters during the technically complex transition to digital broadcasting during which there will be significant interference protection issues for new licensees seeking to initiate service in the Lower 700 MHz Band.

## II. Discussion

### A. Spectrum Allocation Issues

#### 1. Reallocation of the 698–746 MHz Band

3. Domestically, the Lower 700 MHz Band is currently allocated on a primary basis to non-government broadcasting. TV Channels 52–59 (each channel represents 6 megahertz of spectrum) occupy the band. TV broadcast services may also use TV subcarrier frequencies, and, more generally, their TV channels,

on a secondary basis for other purposes, including datacasting. The band is further allocated to the fixed service for subscription television operations in accordance with part 73 of the Commission's rules. Internationally, the band is allocated worldwide on a primary basis to broadcasting services. The band is also allocated to fixed and mobile services in Region 2 (which includes the United States) on a secondary basis and in Region 3 on a co-primary basis. A footnote to the International Table of Frequency Allocations elevates the allocation to fixed and mobile services to primary status in the United States, Mexico, and several other Region 2 countries, but this primary allocation has yet to be implemented domestically.

4. In recent years, there has been tremendous growth in new wireless services and demand for spectrum. In previous proceedings, the Commission has noted that the propagation characteristics of the Lower 700 MHz Band are ideal for two-way mobile communications. Further, a resolution adopted at World Radiocommunication Conference-2000 (WRC-2000) recognized that some administrations may use the Lower 700 MHz Band for 3G services. At WRC-2000, the United States proposed that the Lower 700 MHz Band be identified as one of several candidate bands for the terrestrial component of new advanced communication applications. However, significant investment and planning is required by broadcasters to build new digital facilities and relocate operations. The Commission has anticipated that the band will remain principally a television band until the end of the digital transition and early recovery of additional spectrum beyond the Upper 700 MHz Band was not contemplated in the DTV transition plan. Because of the statutory requirement to auction this spectrum several years in advance of the end of the transition, the Commission balances the opportunities for new services with the challenges faced by incumbent broadcasters.

#### a. Fixed, Mobile, and Broadcast Allocation

5. The Commission reallocates the entire 48 megahertz of spectrum in the Lower 700 MHz Band to fixed and mobile services, and retains the existing broadcast allocation. This decision is consistent with the Commission's allocation plans as set forth in the *Spectrum Reallocation Policy Statement* (14 FCC Rcd 19868 (1999)). It is also consistent with the principles of the policy statement "that flexible allocations can promote efficient

spectrum markets, which, in turn, encourages efficient use of the spectrum. Furthermore, it conforms with positions the United States has taken at the World Radio Conference (WRC). The broadcast allocation supports broadcasting that will take place during the DTV transition period (and LPTV and TV translator operations on a secondary basis for the indefinite future). It also draws on the Upper 700 MHz Band proceeding, where the Commission permitted both broadcast and advanced fixed and mobile service use of the band (with service rules that limited the power of any new broadcasting services in order to insure the protection of new wireless entrants in the band). The Commission notes that no commenter suggested an alternative basis for its allocation decision, but, instead, those who do not fully support the Commission's proposal expressed narrow technical concerns about a shared allocation as opposed to broader concerns about the overall spectrum management approach.

6. The Commission describes how the *R&O* meets several additional statutory responsibilities. 47 U.S.C. 309(j)(14) requires the Commission to reclaim and assign the Lower 700 MHz Band by competitive bidding. Furthermore, 47 U.S.C. 309(j)(3) sets forth objectives that the Commission must promote in developing our competitive bidding methodology including, *inter alia*, the development, and rapid deployment of new technologies. As in the Upper 700 MHz Band proceeding, the Commission expects many of the new technologies to be developed and deployed will support advanced wireless applications, and wants to provide licensees with the maximum opportunity to make use of these opportunities.

7. The Commission finds that the flexible use approach it is adopting is consistent with 47 U.S.C. 303(y), and meets all four of the criteria outlined in that section. 47 U.S.C. 303(y) requires the Commission to make affirmative findings that a proposed flexible use allocation (1) is consistent with international agreements; (2) would be in the public interest; (3) would not deter investment in communications services and systems, or technology development; and (4) would not result in harmful interference among users. Because the band is allocated worldwide on a primary basis to the broadcasting service, and is also allocated to the fixed and mobile services in Region 2 (which includes the United States) on a primary basis, via footnote to the International Table of Frequency Allocations, the Commission may add a fixed and mobile service

allocation to the existing broadcast allocation and be consistent with international band management plans. The Commission envisions that the existing broadcast allocation (in conjunction with the new technical rules designed to support both broadcast and fixed and mobile services) will support investment in and development of a variety of broadcast-type applications in the band, including two-way interactive services and services using coded orthogonal frequency division multiplex (COFDM) technology. These applications could include video transmissions to mobile receivers, similar to services being developed in Europe and Asia. Development of these applications, it concludes, would be in the public interest.

8. The Commission recognizes that these public interest benefits might be frustrated if broadcast and fixed and mobile services cannot successfully co-exist, and it therefore adopts technical rules that account for the differences between the services. The rules it adopts will allow the two services can co-exist without harmful interference among users and, in doing so, will not deter investment in and development of technology for the two services. The flexible use characteristic of the allocation—by which both broadcast and fixed and mobile services is allowed in the band—is identical to the approach the Commission took in the Upper 700 MHz Band proceeding.

9. The Commission prohibits licensees who acquire the reallocated spectrum from providing full-power broadcast services of the type that has traditionally been made available in this band because such high-powered broadcasting is likely to cause harmful interference and deter development of the band. Otherwise, the Commission would have to adopt interference protection criteria that would make a large portion of this band effectively unusable for those licensees who seek to offer new wireless applications. However, the approach the Commission takes also recognizes that a highly restrictive approach to broadcasting power limits would sharply limit broadcasting options for this band and would frustrate the public interest afforded by a broadcast allocation.

#### b. Special Considerations for Broadcast Allocation

10. At the end of the DTV transition, television broadcasting will remain adjacent to the Lower 700 MHz Band, with full power and Class A low power television stations operating on TV Channel 51. The Commission declines

to adopt a guard band or other specialized mechanism to protect DTV operations on Channel 51, but instead relies on interference protection criteria to ensure that new licensees adequately protect core TV channel operations. The Commission takes this approach because the protection for Channels 52–59 is no different from the protection for the core TV channels (Channels 2–51)—only the duration of that protection differs. Accordingly, the Commission concludes that there is no basis for adopting additional protective measures at the lower end of the Lower 700 MHz Band and instead finds that the protective measures suggested by commenters are unnecessarily restrictive. Instead of making special considerations for new licensees—such as adjusting our allocation to minimize the presence of systems with low immunity to high-power signals—the Commission chooses a flexible approach and expects licensees to consider potential interference situations when designing and developing their systems. The Commission believes that bidders for this spectrum will take into account criteria established to protect the core TV channels and will develop their business plans, services, and facilities accordingly.

#### c. Low Power Television Service and Television Translators

11. The Commission will permit LPTV operations (which, for purposes of this proceeding, includes television translators) in the Lower 700 MHz Band after the end of the transition on a secondary basis. These stations may operate until they cause actual interference to a DTV station or new licensee and LPTV stations may negotiate interference agreements with new service providers. The Commission prohibits LPTV stations, licensed under 47 CFR 74 subpart G from causing harmful interference to stations of primary services—including new licensees in the band. (However, if a licensee who acquires Lower 700 MHz Band spectrum through the competitive bidding process opts to use the spectrum for low power digital broadcasting, such a station would have primary regulatory status.)

12. The Commission concludes that its approach appropriately balances two largely conflicting interests. 47 U.S.C. 337(e)(2) states that after allocating the Upper 700 MHz Band, the Commission “shall seek to assure \* \* \* that each qualifying low-power television station is assigned a frequency below 746 MHz to permit the continued operation of such station.” However, LPTV operators in the Lower 700 MHz Band must be

prepared to cease service once television Channels 52–59 are reclaimed, pursuant to 47 U.S.C. 309(j)(14), when new licensees (who will have primary status) begin using the band. Congress has recognized—and the Commission has repeatedly noted—that not all LPTV stations can be guaranteed a certain future due to the emerging DTV service, and the Commission concludes that it is inadvisable to defer the ultimate displacement of LPTV operations to the detriment of new primary service licensees in the band. To grant LPTV operations special considerations vis-à-vis new licensees would turn the concept of secondary status upside down and would retard the potential development of new and innovative services.

13. Because the overall framework for the Commission’s treatment of LPTV stations was previously decided outside of this proceeding, the Commission concludes that there is no reason to modify those decisions and notes that those commenters who outline circumstances in which they believe LPTV should have greater protection do not explain how circumstances have changed since the Commission last examined the issue. LPTV licensees have been aware of their secondary status throughout the transition and LPTV entities with operations on Channels 52–59 must recognize the possibility that a primary licensee can initiate service in the band. The *DTV Sixth Report and Order* (62 FR 26684, May 14, 1997) identified the core DTV spectrum to consist of those TV channels below Channel 52 and stated that secondary operations (such as LPTV) will be able to continue to operate until a displacing DTV station or a new primary service provider is operational. The requirement to auction reclaimed spectrum has also been in place since 1997. Because of the steps it has taken to allow continued LPTV operation, including allowing LPTV licensees to remain in the band until they actually cause interference and permitting LPTV operators to negotiate protection agreements, the Commission nevertheless expects that many LPTV licensees will be able to continue to operate in the band for some time to come.

14. The Commission also rejects specific comments that suggest that some LPTV stations should receive the same protection from displacement and interference as full power television stations because of the Commission’s obligations with respect to Class A status, and decides that a proposal that

out-of-core LPTV stations that are eligible for Class A status be allowed to continue operating until such a time as an in-core channel becomes available is overly broad and inconsistent with the Commission's ultimate goals for the band. Furthermore, it rejects a request to afford continued secondary status to part 74 low power broadcast auxiliary devices (such as wireless microphones) operating in the Lower 700 MHz Band, and to establish a new service in part 95 of our Rules to accommodate their use.

#### d. Satellite Services

15. The Commission does not include a satellite allocation in the Lower 700 MHz Band and concludes allowing satellite operations would be inconsistent with the principles of effective spectrum management in the Lower 700 MHz Band. The Commission concludes that the inherent difficulties in coordinating satellite and terrestrial services could delay or stifle the introduction of new services in this band; questions whether a flexible satellite allocation in this band could meet the statutory requirements 47 U.S.C. 303(y); and notes that current international allocations do not include satellite operations in this band.

## 2. Transition Issues

### a. Incumbent Broadcasters

16. The Commission's treatment of issues related to incumbent broadcasters who will continue to use the band throughout the DTV transition recognizes differences between the Upper and Lower 700 MHz Bands. Early recovery of additional spectrum beyond the Upper 700 MHz Band was not contemplated in the DTV transition plan. Even with the mechanisms it adopts to encourage voluntary band clearing in both the Upper and Lower 700 MHz Bands, the Commission has never anticipated that it will be able to clear the Lower 700 MHz Band before the Upper 700 MHz Band. Because of this history, and because encumbrances in the Lower 700 MHz Band are likely to make band clearing a more complex operation, the Commission realizes that some broadcasters may have accepted an allotment in the Lower 700 MHz Band with the expectation that the band would continue to be extensively used for broadcasting throughout the transition.

17. New licensees will need to take into account the large number of digital broadcasters who will operate in the Lower 700 MHz Band during the transition. On average, there are slightly more than ten times the number of digital stations per channel on Channels

52–59 as compared to Channels 60–69. While the planning for the DTV Table of Allotments sought to minimize use of out-of-core channels, the Commission was unable to accommodate a second digital channel for all broadcasters within the "core" broadcast spectrum. The degree of incumbency in the Lower 700 MHz Band—consisting of both digital and analog broadcasters—is likely to make it far more difficult for new services to operate in this band, particularly in major metropolitan markets, prior to the end of the transition. The Commission notes that the degree of incumbency in the Lower 700 MHz Band underscores its obligation to fully protect incumbent full-power analog and digital broadcasters during the transition period, and the rules it adopts are designed to support this core value.

#### (i) Analog Stations

18. Currently, there are 94 licensed full service NTSC analog stations and seven approved analog construction permits in the Lower 700 MHz Band. Although this figure represents approximately the same number of analog incumbents as in the Upper 700 MHz Band, the Lower 700 MHz Band consists of less spectrum and, therefore, incumbent licensees are more densely situated across the band. The Commission addresses requests for new NTSC stations in the 698–746 MHz band in two parts: (1) Petitions for new allotments and (2) applications for construction permits. Some of these applications may also include requests for modifications of the allotment such as changes in frequencies to cure interference to new DTV operations or as a replacement channel for channels in the Upper 700 MHz Band (*i.e.* channels 60–69). The Commission dismisses the pending petitions for new NTSC channel allotments in the 698–746 MHz band. In this regard, it notes that its staff previously dismissed a number of petitions for rulemaking for new station allotments on channels 52–58 as defective, and petitions for reconsideration have been filed. Given its decision to dismiss all petitions on these channels, the Commission concludes that the pending petitions for reconsideration are now rendered moot and determines that they will be dismissed. The Commission concludes that beginning the process of adding new analog television allotments or stations at this stage of the transition to digital television would be inconsistent with the DTV transition process because the allotment proceedings, station authorization, and construction would likely not be completed until much later

in the DTV transition. The new licensee might then have only a limited period of time to operate in analog before being required to transition to digital service. The Commission also notes that the Balanced Budget Act of 1997 requires that analog television spectrum be reclaimed for new services and concludes that adding analog allotments or stations in the 698–746 MHz band would be inconsistent with the purpose of that Act and would not foster the timely and efficient transition to digital television. The Commission notes that petitioners may, however, refile a new DTV channel allotment petition on a core channel (2–51), subject to meeting the DTV spacing requirements.

19. With regard to applications for construction permits, the Commission recognizes that parties have made investments in these applications and that they are generally further along in the regulatory process and thus could potentially provide service to the public on a more near-term basis. While it believes that these applications can be processed in a manner consistent with our DTV transition policies, the Commission does not believe that deploying service in analog format is consistent with the statutory mandate to reclaim this spectrum for new services or with its DTV transition policies. It concludes that authorizing additional analog television operations at this stage in the DTV transition so close the May 1, 2002, date when commercial broadcast stations are required to be operating on their digital allotments would be inconsistent with the goal of achieving a rapid conclusion of the transition.

20. Although the Commission does not wish to encourage the expansion of analog television service, it also notes that digital deployment on the allotments for which there are pending analog applications will introduce new digital services and will promote the acquisition of digital receiving equipment by consumers. In addition, the Commission concludes that such an approach will avoid the complications that could arise in requiring licensees to convert their analog operation to digital operation relatively soon after they commence analog operation. It also believes that new service providers may be able to co-exist more easily with digital television stations given that such stations operate with lower power and their signals may generally be less susceptible to interference than analog television signals. Accordingly, the Commission provides a 45-day opportunity for applicants to request a change in their pending applications for a construction permit or petition for rule

making. Requests to provide analog or digital service in the core spectrum will require the filing of a petition for rulemaking to amend either the TV Table of Allotments (47 CFR 73.606) or the DTV Table of Allotments (47 CFR 73.622) or an amendment to such a petition if the applicants have already filed one. The Mass Media Bureau will set forth these procedures in a soon-to-be released Public Notice. The Commission made the 45-day window effective upon release of the Commission's *R&O*. Applications can be modified in one of two ways: (1) To provide analog or digital service in the core television spectrum, *i.e.*, channels 2–51 or (2) to provide digital service in the 698–740 MHz band, *i.e.*, channels 52–58 (In this limited circumstance, the Commission will not treat these application amendments to provide digital service in channels 52–58 as new DTV allotments under 47 CFR 73.622(a)(1)). At the end of the 45-day period, the Commission will dismiss any pending application that does not meet either of the above conditions. Finally, because of the adjacent channel interference that new stations on channel 59 could cause to new licensees in the adjacent Upper 700 MHz Band, the Commission will no longer accept or grant any application for channel 59, and parties with outstanding applications that specify channel 59 and who have not yet filed a channel allotment rulemaking petition to specify another channel must do so within the 45-day period. The Commission also amends its rules to specify that petitions requesting a change in the channel of an initial DTV allotment may only be amended to specify channels 2–58.

(ii) Low Power Stations

21. At the time the *NPRM* was adopted, there were 835 licenses and 244 construction permits for LPTV operations on Channels 52–59, and an additional 607 pending applications for LPTV stations on those channels. Although the Commission recognizes that it must clear all LPTV operations from the Upper 700 MHz Band at the end of the transition, it also finds that it has additional flexibility with respect to operations in the Lower 700 MHz Band. Thus, to ensure the continuation of television service, the Commission will continue to permit LPTV and TV translator stations to request the use of channels 52–69 in order to eliminate or avoid conflicts with NTSC and DTV stations or allotments. This decision recognizes that these “displacement relief” stations may be in very rural areas of the country where the 700 MHz Band could be used by these stations

with little chance that they would again be displaced in the near future. The Commission takes a measured approach with regard to the filing and processing of applications seeking new LPTV and TV translator stations to operate on channels 52–69. With respect to all such applications on file, namely those tendered in the August 2000 LPTV and TV translator filing window, the Commission will process these applications and, if found acceptable, grant them. The proposed channel 52–69 operations will also be authorized on a secondary basis.

22. The Commission sought an approach that will not unduly encumber the 700 MHz Band further during the DTV conversion, but will also further its desire to treat fairly all of the nearly 4,700 LPTV and TV translator applicants that filed during the August 2000 window. Accordingly, it revises its LPTV displacement relief policies and rules as follows: Future LPTV and TV translator permittees and licensees that tendered new station applications during or subsequent to the August 2000 filing window and have been authorized to operate in the 700 MHz Band (TV channels 52–69) will be entitled to displacement relief only in order to eliminate or avoid interference conflicts. Priority over pending Class A TV, LPTV or TV translator station applications will not be afforded to the displacement applications of these future LPTV or TV translator permittees or licensees solely by virtue of their authorization to operate in the 700 MHz Band. With respect to future filing windows, the Commission retains the discretion to geographically restrict or preclude altogether the filing of applications for new LPTV and TV translator stations seeking to operate on channels 52–69. The Commission will permit secondary operation of LPTV stations below channel 60 after the end of the transition.

23. Throughout the DTV and related proceedings, the Commission has recognized that the transition and reallocation of spectrum will significantly affect LPTV. It concludes that the rule changes previously adopted in the DTV proceeding, in conjunction with its decision to allow continued LPTV operations in the Lower 700 MHz Band strike the appropriate balance between facilitating the DTV transition and reallocating the spectrum as required by law, and permitting continued LPTV operations outside the core channels.

b. Interference Protection for TV Services

24. The Commission adopts the same protection criteria for analog TV stations in the Lower 700 MHz Band as it previously adopted in the Upper 700 MHz Band. Because these limits are based on the results of a thorough experimental study of land mobile interference to analog television conducted many years before the advent of digital television, the Commission concludes that they properly apply only to analog television and finds that it is not necessary or appropriate to apply the same interference protection for DTV stations in the Lower 700 MHz Band. It concludes that the D/U ratio of 17 dB for co-channel interference to digital stations should be 23 dB for protection of DTV from wideband land mobile transmissions. At the edge of the DTV (noise-limited) service area, where the DTV S/N ratio is small, the value of D/U is 23 dB for co-channel interference protection from another DTV station (*i.e.*, the desired signal must be at least 23 dB greater than the undesired signal). A wideband land mobile or digital broadcast signal will increase the noise floor for the DTV reception just as though it were a DTV transmission. Because DTV receivers treat interference from wideband co-channel signals as an increase in the noise floor of the desired signal, the Commission finds that new land mobile systems operating in the Lower 700 MHz Band employing wide band noise-like signals need to provide co-channel DTV stations with an additional 6 dB of protection. 6 dB is the difference between the D/U ratio of 17 dB that applies to the Upper 700 MHz Band and the value 23 dB that the Commission finds is necessary to fully protect DTV from wideband transmissions. The corresponding maximum field strengths are 18 dB $\mu$  and 64 dB $\mu$  respectively for co- and adjacent-channel land mobile transmissions. The Commission permits fields no stronger than these at the DTV service contour where the DTV signal strength is 41 dB $\mu$ . This criterion, the Commission concludes, will best protect existing broadcast operations.

25. The Commission concludes that its approach is warranted because the number and density of incumbent TV stations in the Lower 700 MHz Band is greater than those in the Upper 700 MHz Band and a major factor that led to the specific protection standards adopted in the Upper 700 MHz Band—the goal of maximizing the utility of the new public safety allocation—is not present in this case. The Commission also rejects a proposal to revise the

Grade B contour predictions/broadcast television protections based on new field strength measurements. The Commission concludes that any such ad hoc re-evaluation of broadcast protections could inadvertently lead to loss of service by viewers.

#### c. Coordination With Canada and Mexico

26. Because the United States is obligated under existing agreements to protect the signals of Canadian and Mexican TV broadcast stations located in the border areas, new licensees' use of the band will be subject to any future agreements that the United States establishes with Canada and Mexico. Until that time, new licensees in the band will be subject to existing agreements and the condition that harmful interference not be caused to, and must be accepted from, television broadcast operations in those countries.

#### B. Service Rules

27. The *R&O* provides the service rule decisions required by the Commission's reallocation of the Lower 700 MHz Band to fixed, mobile, and broadcast services. In the *R&O*, the Commission generally applies the part 27 licensing and operational rules that it applied previously to the spectrum band 747–762 MHz and 777–792 MHz (Upper 700 MHz Commercial Band). The Commission believes that the general application of the same part 27 licensing and operating rules to the 700 MHz Band as a whole will help promote flexible and efficient use of the spectrum. In the *Spectrum Reallocation Policy Statement*, the Commission explained that flexibility can be promoted by harmonizing the rules for like services. The Commission continues to believe that regulatory neutrality and operational uniformity across the 700 MHz Band will permit the marketplace to achieve the highest valued end use of the spectrum. These part 27 rules will enable the broadest possible use of this spectrum consistent with the spectrum management obligations and objectives identified in the Commission's *Spectrum Reallocation Policy Statement*.

28. While the Commission generally adopts the same part 27 framework established for licenses in the Upper 700 MHz Commercial Band, the Commission's service rules for the Lower 700 MHz Band also contain some distinctive elements based on its assessment of similarities and differences between these spectrum resources. These include the specific record pertaining to the band, the potential demand for these licenses, the

nature of the spectrum resource (e.g., propagation characteristics), statutory considerations, various external constraints (e.g., degree of incumbency, scarcity of spectrum suitable for mobile applications), and several longer-term policy objectives (e.g., the pace of the DTV transition, the feasibility of clearing the band). As a result, the Commission has added definitional and technical rules to part 27 to reflect what it believes to be the optimal initial scope of licenses for the Lower 700 MHz Band.

29. These service rules, along with the competitive bidding provisions that the Commission adopts in the *R&O*, derive from the Commission's statutory obligations under 47 U.S.C. 309(j). 47 U.S.C. 309(j)(3) outlines a number of public interest objectives that the Commission must consider when establishing the characteristics of licenses that are to be assigned by competitive bidding and designing auction systems. These statutory objectives include the development and rapid deployment of new technologies, products, and services for the benefit of the public, the promotion of economic opportunity and competition, the recovery of a portion of the value of the spectrum made available for commercial use, and the efficient and intensive use of the spectrum. Further, 47 U.S.C. 309(j)(14)(c) directs the Commission to reclaim, reorganize, and auction this spectrum well before broadcasters are required to vacate the band at the end of the DTV transition period. The Commission believes that adopting flexible, market-based service rules is the most appropriate approach for implementing its 47 U.S.C. 309(j) statutory directives.

#### 1. Scope of Licenses

30. The *NPRM* sought comment on the three sets of issues that define the scope of licenses for the Lower 700 MHz Band: the permissible licensed services, the size of spectrum blocks, and the size of licensed service areas. By these decisions, the Commission seeks to define an initial scope of licenses that can be obtained and used by a wide range of entities and services. It is the Commission's intent that market forces assign this spectrum to its highest valued use and thereby determine the ultimate use of the band.

#### a. Permissible Licensed Services

31. The Commission will apply § 27.2 of its rules to define the permissible communications for the Lower 700 MHz Band and allow a multitude of fixed, mobile, and broadcast uses that the market may demand. Because the Commission has declined to reallocate

the Lower 700 MHz Band for satellite use, the *R&O* does not consider service rules for the deployment of satellite operations on this band. Consistent with the Commission's *Spectrum Reallocation Policy Statement*, this flexible use approach will allow the provision of services to the public that could include mobile and other digital new broadcast operations, fixed and mobile wireless commercial services (including Frequency Division Duplex (FDD) and Time Division Duplex (TDD) based services), as well as fixed and mobile wireless uses for private, internal radio needs. The record in this proceeding demonstrates demand for expanded wireless services in the Lower 700 MHz Band, particularly in non-urban areas, for uses ranging from the implementation of next generation applications and extensions of existing mobile and fixed networks to the implementation of various innovative stand-alone technologies. It also demonstrates demand for certain broadcast and other broadband applications that could include two-way interactive, cellular, and mobile television broadcasting services. The Commission therefore declines to exclude all broadcast services and will instead allow any broadcast services that meet its part 27 technical rules. These technical rules will provide opportunities for existing broadcasters and others who wish to operate certain new digital television services in the Lower 700 MHz Band. The Commission does not wish to exclude competitors by adopting use restrictions on spectrum with characteristics suitable for new broadcast, wireless, and broadband services.

32. This decision will permit market forces to effectively assign spectrum to its highest valued use as well as meet the Commission's statutory mandate under 47 U.S.C. 303(y) to ensure harmful interference will not result from the permitted flexibility. As part of the Commission's commitment to establish maximum practicable flexibility for services, the Commission has determined and lessened the potential for interference by the Commission's power limit and other technical decisions set forth in the *R&O*. The Commission believes this approach affords maximum flexibility while promoting efficient use of scarce spectrum and preventing harmful interference between mobile wireless and broadcast applications using a variety of different technologies.

#### b. Band Plan

33. The Commission adopts a band plan that divides the 48 megahertz of

reallocated spectrum into three 12-megahertz blocks, with each block consisting of a pair of 6-megahertz segments, and two 6-megahertz blocks of contiguous, unpaired spectrum. The Commission's decision to institute multiple paired and unpaired blocks in a combination of sizes and pairings accommodates the proposals of nearly all of the parties participating in this proceeding. Although two commenters advocated a larger initial allocation per spectrum block, their recommended sizes were not significantly larger than 12 megahertz. The block sizes that the Commission adopt, therefore, should not burden their attempts to acquire more than 12 megahertz of spectrum in any given area. Moreover, the Commission's decision not to apply any spectrum aggregation limits to the Lower 700 MHz Band will permit parties seeking larger blocks to aggregate spectrum both at auction and in the secondary market.

34. The size and placement of the five blocks reflect several important spectrum management considerations. Each of these blocks corresponds with either one or two 6 megahertz television channels. The Commission agrees that this will facilitate use of the Lower 700 MHz Band by analog and digital broadcasters as well as a variety of fixed and mobile wireless services. In addition, this alignment will minimize the number of incumbent television licensees to which a new Lower 700 MHz Band licensee's operations would potentially cause interference.

35. Placing the two unpaired 6-megahertz blocks at the center of the band plan has several advantages. It provides an opportunity for licensees to aggregate both licenses and thereby offer services with very wide emission types that may require more than 6 megahertz of contiguous spectrum. Centering these two blocks also results in 30-megahertz separation between the upper and lower segments of the 12-megahertz paired licenses. Such separation is consistent with licenses in the Upper 700 MHz Commercial Band and meets the requirements of many two-way technologies and equipment.

36. Finally, the size and nature of each paired segment should make those portions of the spectrum equally suitable to firms employing technologies that rely on unpaired spectrum, as well as firms seeking to launch certain new broadcast operations. Each segment consists of 6 megahertz of contiguous spectrum, an amount cited by both broadcast interests and TDD advocates as instrumental to their operations. In addition, all six segments are symmetric in size and will be subject to power

limits based on usage rather than frequency, an approach that was adopted for the Upper 700 MHz Commercial Band in the *Upper 700 MHz MO&O and FNPRM*. By not imposing different restrictions on operations in upper versus lower segments, the Commission increases the potential use of these segments by new technologies and new service providers that do not rely on paired spectrum.

37. This flexible band plan offers five licenses in any given area that are of sufficient bandwidth to permit a variety of services. The Commission has considered commenters' desires for multiple blocks by adopting smaller blocks of spectrum. The Commission has balanced this demand, however, against its goal of enabling new broadband services and advanced wireless services on spectrum with propagation characteristics well suited for such applications. Although it acknowledges that encumbrances by broadcasters may preclude such services in the near term, the Commission is committed to reorganizing the spectrum in such a way that its bandwidth assignments, at a minimum, can eventually support the deployment of the new technologies and services that it is bound to promote by statute.

38. As compared to smaller block sizes, the Commission believes that 12 megahertz paired blocks are required to afford sufficient capacity for the provision of many new services. Accordingly, the Commission has adopted three 12-megahertz paired blocks to provide opportunities for augmentation of existing systems, especially CMRS systems, as well as for new systems. The Commission also believes that 12-megahertz licenses could in some cases facilitate band clearing and new licensees' use of the Lower 700 MHz Band during the DTV transition.

39. In addition to the three 12-megahertz paired blocks, the Commission has adopted two 6-megahertz unpaired blocks because it believes they add flexibility to the band plan while offering the minimum capacity for the provision of additional new services, including certain broadband services. The Commission finds that a combination approach is appropriate given the interest in small spectrum block sizes, the support by broadcasters for 6-megahertz blocks, and the *R&O's* technical rule decisions that permit certain new broadcast operations in the Lower 700 MHz Band. In addition, a 6-megahertz contiguous block of spectrum is sufficient to allow for development and deployment of certain services including new

broadcast services and fixed and mobile wireless services that do not depend on paired frequencies.

40. In providing a flexible band plan with multiple spectrum blocks and small sizes, the Commission presents ample opportunities for participation by rural telephone companies and small businesses. The Commission therefore declines to set aside 10 to 12 megahertz in each geographic licensing area for designated entities. As opposed to restricting certain firms' access to spectrum, the Commission has created five smaller spectrum licenses in each geographic area of the United States.

#### c. Size of Service Areas for Geographic Area Licensing

41. The Commission adopts a geographic area licensing approach to assign licenses in the Lower 700 MHz Band. This is consistent with the Commission's past experience that geographic area licensing, as compared to site-specific licensing, offers licensees superior flexibility to respond to market demands.

42. Regarding the size of each service area for geographic licensing, the Commission has determined that the most appropriate configuration for the Lower 700 MHz Band is based on a combination of large regional areas and small geographic areas. The Commission therefore will license the five blocks in the Lower 700 MHz Band plan as follows: the two 6-megahertz blocks of contiguous unpaired spectrum, as well as two of the three 12-megahertz blocks of paired spectrum, will be assigned over 6 EAGs as defined in the Upper 700 MHz Band proceeding; the remaining 12 megahertz block of paired spectrum (designated as Block C) will be licensed over 734 MSAs and RSAs originally adopted for the cellular radiotelephone service with modifications for cellular market 306, which covers the Gulf of Mexico, and for all MSAs and RSAs that border the Gulf. See 47 CFR 27.6(c).

43. The Commission's assignment of 36 megahertz of spectrum in this band over EAGs complements the approach used for the Upper 700 MHz Commercial Band. As the Commission observed in the Upper 700 MHz Band proceeding, EAGs can provide licensees significant flexibility to address issues associated with protection of incumbent TV stations. The Commission believes that certain interference risks are offset by avoiding the need for complicated agreements that could arise if spectrum were licensed in smaller areas where several geographic service areas could overlap a TV protection zone.

44. The use of EAGs establishes an initial license scope that provides flexibility and opportunities for a wide variety of fixed, mobile, and new broadcast services. In the Upper 700 MHz Band proceeding, the Commission noted that the ability to build nationwide service was an important advantage of EAGs, along with the opportunity EAGs offer providers to achieve economies of scale in their operations. Such efficiencies have allowed providers to offer or expand innovative pricing plans such as one-rate type plans, which in turn reduce prices to consumers. Licensees may, therefore, use EAGs to build larger, even nationwide footprints.

45. Despite the efficiencies associated with nationwide service, however, the Commission believes the use of EAGs is preferable to the assignment of nationwide service areas. The vast majority of commenters recommend using much smaller geographic areas, and only two commenters recommend assigning any portion of this spectrum across a nationwide service area. Using EAGs instead of nationwide license areas facilitates the acquisition of spectrum by different providers with spectrum needs that are confined to their particular region or market. As the Commission observed in the Upper 700 MHz Band proceeding, EAGs are easier to partition than nationwide licenses, which also may help serve the needs of regional providers. Furthermore, the Commission believes aggregating EAGs into nationwide areas is an administratively straightforward process, and the Commission notes that this may be simplified through the auction process. While any type of aggregation is not without cost, the Commission believes that such costs are outweighed by the significant benefits associated with use of large regional areas, such as EAGs.

46. The Commission's assignment of a 12-megahertz block of paired spectrum, 25 percent of the Lower 700 MHz Band spectrum, over MSAs/RSAs reflects its desire to promote opportunities for a wide variety of applicants, including small and rural wireless providers, to obtain spectrum. This is consistent with the Commission's congressional mandate to promote "economic opportunity and competition" and to disseminate licenses "among a wide variety of applicants, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women." 47 U.S.C. 309(j)(3)(B). In contrast to the Commission's experience in the Upper 700 MHz Band proceeding, many commenters in this proceeding favor

geographic areas that are smaller than the 6 EAGs used for the Upper 700 MHz Commercial Band. Licensing a portion of the Lower 700 MHz Band over these small geographic areas balances the playing field such that small and rural providers will have an opportunity to participate in the auction and the provision of spectrum-based services. The Commission believes that a combination of large and small geographic service areas best accomplishes these various statutory objectives.

47. The Commission, therefore, recognizes the importance to small and regional providers of licensing a significant portion of this spectrum band across MSAs and RSAs. The propagation characteristics of the spectrum in this band make it conducive to business models that are built on serving consumers over a large area. The Commission concludes that MSAs and RSA are the appropriate size for small geographic licenses based on the record in this proceeding, which indicates a strong preference for these areas over, for example, EAs or MEAs. MSAs and RSAs represent known area sizes to many business entities, especially small regional and rural providers. These smaller areas also may correspond to the needs of many customers, including customers of small regional and rural providers. Specifically, MSAs and RSAs represent areas over which many customers may desire to receive the majority of their wireless or broadcast-type services and thus can be the focus of smaller carriers that do not wish to bid on or provide service to larger regions. Assigning a portion of the Lower 700 MHz Band across MSAs and RSAs may allow licensees to focus on consumers that seldom travel outside of these geographic areas and that do not place a high value on roaming or long distance services. While some commenters recommend that all of the spectrum in this band be allocated to such small areas, the Commission declines to take such an approach. As the Commission noted in the *Spectrum Reallocation Policy Statement*, it seeks to make this spectrum available for use by a variety of new technologies and providers. The Commission believes that a combination of large and small geographic service areas, rather than an assignment comprised only of small service areas, best accomplishes these goals.

## 2. Technical Rules

48. In the interest of maximizing spectrum use, all new broadcast and fixed and mobile wireless operations in

the Lower 700 MHz Band will be governed generally by the flexible technical standards contained in part 27 of the Commission's rules. Licensees are subject, therefore, to part 27's provisions relating to equipment authorization, frequency stability, antenna structures and air navigation safety, international coordination, disturbance of AM broadcast station antenna patterns, and protection from interference. See 47 CFR 27.51, 27.54, 27.56, 27.57, 27.63, 27.64. Although part 27 provides an appropriate technical framework for the development of both wireless and new broadcast services, the Commission has revised certain provisions as they apply to the Lower 700 MHz Band so as to promote greater flexibility in the choice of licensed services.

### a. Power Limits and Related Requirements

#### (i) Power Limits

49. For all services operating in the Lower 700 MHz Band, the Commission adopts a maximum power limit of 50 kW ERP subject to specific requirements regarding non-interference. Specifically, for those services operating base or fixed stations at power levels greater than 1 kW ERP, the Commission adopts a power flux density (PFD) standard as a way to address the interference potential, as well as a general notification requirement. Following the approach adopted for the Upper 700 MHz Commercial Band, the Commission adopts a maximum power limit of 30 watts ERP for mobile and control stations, and 3 watts ERP for portable (hand-held) devices. In addition, all operations 1 kW ERP or below will be subject to previously established requirements governing antenna height above average terrain (HAAT).

50. The Commission's choice of a 50 kW maximum ERP limit will promote efficiency and maximize flexibility to the extent practicable by allowing the greatest number of different services to co-exist—and to serve more consumers—subject only to reasonable standards for non-interference. The Commission believes such a power limit will produce the most efficient use of this spectrum resource. The Commission disagrees with comments suggesting that use of this spectrum should be limited to wireless applications, or that the 1 kW limit applied to the Upper 700 MHz Commercial Band should be applied to the Lower 700 MHz Band. In the Lower 700 MHz Band, unlike the Upper 700 MHz Band, there is no issue regarding the need to protect public safety

spectrum from interference. In addition, the Commission has been able to adopt 6 and 12 megahertz blocks for the Lower 700 MHz Band, a band plan that more readily accommodates new broadcast services. The Commission notes that providers of non-broadcast services may also operate at power levels up to 50 kW ERP, provided they comply with the same technical requirements associated with such operation. The Commission believes that to promote flexibility and efficiency, it is important to create a consistent set of technical rules for all services operating in this band.

51. The Commission recognizes that establishing a power limit in excess of 1 kW ERP creates the potential for stations operating at such power levels to cause interference to systems on adjacent channels, especially those that operate at lower power levels. However, the Commission believes that any risk that such interference will be harmful can be mitigated so as not to outweigh the added flexibility that is afforded by the higher power limit. Accordingly, in order to limit such interference and to make the various services compatible, the Commission imposes the following requirement on licensees operating at higher power levels: Licensees operating base stations at power levels in excess of 1 kW ERP must design their systems such that transmissions from their base station antenna produce PFD levels that are no greater than the PFD levels that would ordinarily occur from stations operating at power levels of 1 kW ERP or less. Specifically, the Commission will require licensees operating base stations at power levels greater than 1 kW ERP to limit the calculated PFD of the signal from their base station to 3000 microwatts per square meter at any location at ground level within 1 km of their base station transmitter.

52. This PFD standard will minimize the likelihood of adjacent channel interference to ground-based devices by effectively limiting the energy received by such devices to levels no greater than what they would receive from adjacent channel base stations operating at 1 kW ERP or less. For UHF operations, antenna height tends to be a more important variable than output power in causing/mitigating interference, so the effect of a 50 kW ERP signal on adjacent channel devices operating on the ground will be minimized given the tower heights likely to be used. The Commission has provided calculations that demonstrate, for example, how 50 kW ERP, high antenna broadcast operations can co-exist with lower-power/low antenna height land mobile operations.

53. The Commission believes that current technologies reasonably and practically allow certain measures to limit interference among various services that may be provided in this band. The Commission provides a table that describes the potential for interference that may be caused by a base station operating at 50 kW ERP to a nearby, adjacent channel base station receiver. Based on these sample computations, the Commission concludes that a licensee operating a base station receiver could mitigate potential harmful interference through use of a selective vertical antenna pattern or by downtilting of its receive antenna. In addition to these antenna selections or adjustments, a licensee could mitigate interference through use of improved filtering, by avoiding the use of spectrum at the edge of its authorized block, or through other measures. In any bid for a license within this band, the Commission expects that prospective licensees will take into account any costs that may be necessary to incorporate technical features to alleviate interference issues if adjacent channel licensees operate systems at power levels greater than 1 kW ERP.

54. The Commission will not, however, permit broadcasting at power levels higher than 50 kW (*e.g.*, conventional full-power broadcasting under part 73). As the Commission found for the Upper 700 MHz Commercial Band, the contrasting technical characteristics of broadcasting at these higher power levels and wireless services effectively preclude the development of interference rules that would enable the practical provision of both sets of services on this spectrum. Spectrum for full-power terrestrial broadcast television service has been provided on Channels 2–51. Since the adoption of the *Upper 700 MHz First Report and Order*, the Commission has received no convincing evidence that contradicts its finding that part 73 full-power broadcasting is too different technically from fixed and mobile commercial wireless services to permit a spectrum-efficient co-existence of these services in the Lower 700 MHz Band. Those commenters who believe that these two services may coexist do not provide any specific engineering proposals and only offer generalized assertions that maximum flexibility should be ensured. Maximizing flexibility without due consideration of harmful interference is not in the public interest. Accordingly, the Commission concludes that a 50 kW ERP limit is practicable for maximizing both flexibility and freedom from harmful

interference for the widest number of potential users.

55. The Commission declines to adopt a proposal to let licensees increase their power above 50 kW ERP within their service areas provided they do not cause co- or adjacent-channel interference to other users. The Commission is concerned that this additional flexibility will result in uncertainty as to how all potentially affected licensees (both co- and adjacent-channel) are made aware of a licensee's proposed higher-power and whether these licensees have consented to such operation.

#### (ii) Notification Requirement

56. In the *NPRM*, the Commission requested comment on how innovative service rules can maximize use of this spectrum by different services. To facilitate licensees' use of spectrum and prevent harmful interference, the Commission will require licensees intending to operate base or fixed stations in excess of 1 kW ERP to file notifications with the Commission and provide notifications to all part 27 licensees authorized on adjacent blocks in their area of operation. When applicable, this requirement includes notification to part 27 commercial and guard band manager licensees operating on Channel 60 (746–752 MHz) in the Upper 700 MHz Band. The Commission shall require a licensee intending to operate a higher-power base or fixed station to provide notifications to all adjacent channel part 27 licensees authorized to construct and operate base or fixed stations within 75 km of the higher-power base or fixed station. Licensees filing notifications with the Commission and adjacent channel licensees must provide the location and operating parameters of all base and fixed stations operating in excess of 1 kW ERP. *See* 47 CFR 27.50(c)(5). Such notification must be filed with the Commission and adjacent channel licensees at least 90 days prior to the commencement of station operation. Licensees operating at or below the 1 kW ERP will not be subject to this requirement.

57. This action will ensure that licensees will be notified that their base, fixed, mobile, or portable receivers could be situated in the vicinity of an adjacent channel, high-powered base or fixed station. As discussed in the *R&O*, the Commission has concluded that, under appropriate regulations, a 50 kW ERP limit can be permitted without causing harmful interference among adjacent channel broadcasting and wireless operations. This notification requirement provides an opportunity for licensees to take steps to mitigate

potential interference to their stations—*e.g.*, by employing filters or modifying base station vertical attenuation patterns. In addition to notification, the Commission believes that licensees could employ voluntary coordination to prevent harmful interference.

(iii) RF Safety

58. The Commission will require transmitting facilities and devices in the Lower 700 MHz Band to comply with the existing RF safety criteria identified in § 27.52 of the Commission's rules. *See* 47 CFR 27.52. The Commission has provided guidance on complying with its RF safety exposure limits in OET Bulletin No. 65. The Commission is adopting these RF safety thresholds for this band because the Commission regards them to be essential for the protection of human beings from exposure to radiated RF energy.

b. Co-Channel Interference Control

59. Consistent with the Commission's intent to maximize spectrum use through application of flexible technical standards, the Commission is adopting a field strength limit to address co-channel interference in the Lower 700 MHz Band. The Commission agrees that a field strength limit provides established, objective criteria for licensees to understand the co-channel interference environment in which to construct and operate facilities in the geographic edges of their service areas. The Commission is not adopting a general coordination approach because, as it determined in the Upper 700 MHz Band proceeding, such an approach could impose unnecessary coordination costs for facilities and could lead to possible anti-competitive activities.

60. The Commission adopts for the Lower 700 MHz Band a field strength limit of 40 dBuV/m, the same field strength limit the Commission adopted for the Upper 700 MHz Band and the 800 MHz EA-based and 900 MHz MTA-based SMR services. *See* 47 CFR 27.55(a). The Commission believes that using the same field strength limit that it adopted for these other bands will enable licensees in the Lower 700 MHz Band, including new broadcast providers, to provide effective service within their authorized geographic area, while minimizing co-channel interference to co-channel licensees in adjacent areas. The Commission also notes that § 27.55(a) of the Commission's rules permits licensees, pursuant to mutual agreement, to use a different field strength limit. This will provide licensees with increased flexibility in implementing their

systems without increasing the risk of harmful interference.

c. Out-of-Band Emission Limits

61. The Commission has determined that licensees operating in the Lower 700 MHz Band should be required to attenuate the power below the transmitter power (P) by at least  $43 + 10 \log(P)$  dB for any emission on all frequencies outside the licensee's authorized spectrum. The Commission adopts this standard consistent with the requirements for many of the Commission's radio services, including services in the Upper 700 MHz Commercial Band, which limits out-of-band emissions (OOBE) to no more than 50 microwatts (50  $\mu$ W) of transmitter output power over a typical instrument measurement bandwidth. The Commission notes one commenter's preference for a stricter limit, but determines that in the absence of data and other support from the many parties to this proceeding, it should not increase OOBE limits given the potential adverse effects that may result on the commercial usefulness of the spectrum.

62. Although the Commission adopted an additional  $76 + 10 \log P$  dB limit to apply to OOBE of Upper 700 MHz commercial licensees that might fall within the Upper 700 MHz public safety bands, the Commission sees no need to apply this requirement to licensees in the Lower 700 MHz Band. Given the 18 megahertz of separation between the Lower 700 MHz Band and the Upper 700 MHz spectrum set aside for public safety, the Commission believes that public safety will be adequately protected by the attenuation limits the Commission has imposed on use of the Lower 700 MHz Band.

3. Licensing Rules

63. By its decisions in the *R&O*, the Commission will generally apply part 27's existing rules on applications and licenses to all fixed, mobile, and new broadcast services offered in the Lower 700 MHz Band. The part 27 rules that address applications and licenses provide a licensing framework for the common elements of regulation that are applicable to wireless and new broadcast services alike. Section 27.3 provides for the potential application of specific licensing provisions contained in other parts of the Commission's rules to the extent that they do not conflict with the supervening application of part 27. *See* 47 CFR 27.3. Therefore, a Lower 700 MHz Band licensee could be subject, for example, to licensing aspects of part 22 if providing public mobile services, to part 73 if providing

radio broadcast services, to part 90 if providing private land mobile radio services, and to part 101 if providing fixed microwave services.

64. The Commission finds that the application of part 27 licensing rules permits the flexible use necessary for the variety of services that are permitted by the band's reallocation. The Lower 700 MHz Band, like the Upper 700 MHz Band, is being reclaimed as part of the DTV transition and reallocation for uses that include both broadcast and non-broadcast operations. Part 27 allows licensees to make determinations respecting the services provided and technologies to be used, including provision of the full range of FDD- and TDD-based wireless services, as well as possible new broadcast services. Applying the licensing rules of part 27 will promote innovative services and encourage the efficient use of the 700 MHz Band as a whole.

a. Regulatory Status

65. The Commission agrees with the commenters and finds that a part 27 approach is likely to achieve efficiencies in the licensing and administrative process. Consistent with § 27.10 of the Commission's rules, Lower 700 MHz Band licensees will be permitted to provide any combination of services anywhere within their licensed areas at any time, consistent with the regulatory status specified by the licensee on its FCC Form 601 (*i.e.*, common carrier, non-common carrier, private internal communications, and/or broadcast services) and with applicable interference protection requirements. Licensees operating in the Lower 700 MHz Band are subject to other FCC rule parts depending on the regulatory status of the services provided. *See generally* 47 CFR 27.3. For example, providers of CMRS must comply with applicable sections of Title II of the Communications Act, which governs common carrier service, as well as part 20 of the Commission's rules. To fulfill the Commission's enforcement obligations and ensure compliance with the statutory requirements of Titles II and III of the Communications Act, the Commission will require all Lower 700 MHz Band licensees to identify the service(s) they seek to provide. Consistent with § 27.10 of the Commission's rules, licensees in the Lower 700 MHz Band will not be required to describe the specific services they seek to provide, but only to designate the regulatory status of the service(s). Licensees will also be required to notify the Commission within 30 days of service changes that alter their regulatory status. Pursuant to

§ 27.66 of the Commission's rules, when the change results in the discontinuance, reduction, or impairment of the existing service, a different approach may apply, depending on the nature of the service affected.

66. With respect to the provision of broadcast services, the Commission is adopting the same regulatory approach for the Lower 700 MHz Band as it employed for the Upper 700 MHz Commercial Band. In the *Upper 700 MHz First Report and Order*, the Commission determined that the provision of new broadcast-type services under a part 27 license does not alter the underlying broadcast nature of such services. However, in the *Upper 700 MHz MO&O and FNPRM*, the Commission declined to apply the part 73 regulatory regime to part 27 new broadcast-type licensees in the Upper 700 MHz Commercial Band, stating that it would determine the applicable regulatory framework in the context of the offering of specific, actual new broadcast-type services. The Commission adopts this approach for the Lower 700 MHz Band and will allow any new broadcast services that meet the Commission's part 27 power limits and other technical standards. New broadcast services offered under part 27 will remain subject to the statutory provisions of the Communications Act governing broadcasting and the Commission will determine the applicability of additional provisions from part 73 on a case-by-case basis.

67. Consistent with the approach taken for the Upper 700 MHz Commercial Band, the Commission is permitting private radio uses in the Lower 700 MHz Band. In auctioning recaptured broadcast spectrum subject to 47 U.S.C. 309(j)(14), Congress did not preclude use of the spectrum for private, internal communications. The Commission's reallocation of the Lower 700 MHz Band, therefore, includes the ability to provide private fixed and mobile radio services.

#### b. Eligibility; Foreign Ownership Restrictions

68. Consistent with the Commission's tentative conclusion in the *NPRM*, the Commission will apply § 27.12's eligibility provisions to the Lower 700 MHz Band. See 47 CFR 27.12; see also *id.* § 27.302. As the Commission determined for the Upper 700 MHz Commercial Band, the Commission believes that the benefits of open eligibility also apply to the Lower 700 MHz Band. The Commission agrees that open eligibility will enhance the opportunities for licensees to provide

service in any market or combinations of markets. A policy of open eligibility for the Lower 700 MHz Band will best serve the public interest by encouraging entrepreneurial efforts to develop new services and ensuring the most efficient use of the spectrum.

69. Because the Commission is adopting a flexible approach to regulatory status, all licensees will be subject to the same requirements to file changes in foreign ownership information to the extent required by the part 27 rules. In light of a part 27 licensee's ability to provide common carrier, non-common carrier, private internal communications and/or broadcast services, the part 27 rules require all licensees to report alien ownership to enable the Commission to monitor compliance. By establishing parity in reporting obligations, however, the Commission does not establish a single substantive standard for compliance. A non-broadcast applicant requesting authorization only for non-common carrier or private radio services will be subject to 47 U.S.C. 310(a) but not to the additional prohibitions of 47 U.S.C. 310(b). An applicant requesting authorization for new broadcast or common carrier services will be subject to both 47 U.S.C. 310(a) and 47 U.S.C. 310(b). Regarding foreign ownership of common carrier licenses under 47 U.S.C. 310(b)(4), the Commission will continue to apply the foreign ownership precedent set forth in prior Commission decisions.

#### c. Spectrum Aggregation Limits

70. The Commission will impose no specific limitations on the aggregation of spectrum in the Lower 700 MHz Band. Consistent with the Commission's *Spectrum Cap Report and Order* (67 FR 1626, January 14, 2002) the Commission believes entities should have the flexibility to aggregate Lower 700 MHz spectrum subject only to its 47 U.S.C. 310(d) public interest review.

71. Accordingly, the Commission will not adopt any Lower 700 MHz in-band or 700 MHz cross-band aggregation limits. The Commission agrees that parties should be afforded flexibility at auction or in the secondary market to aggregate sufficient unencumbered spectrum and to commence new services. The Commission recognizes that a single entity could acquire all 48 megahertz of the Lower 700 MHz Band spectrum in any given geographic area. The Commission believes, however, that given the high level of incumbency in the band and the need for flexibility to engineer around incumbent broadcasters, certain aggregations of spectrum may be in the public interest.

72. The Commission has also determined that the Lower 700 MHz Band should not be subject to any out-of-band aggregation limits, including the CMRS spectrum cap. The Commission disagrees with claims that exempting this band from the spectrum cap would lead to excessive concentration of spectrum in the hands of mega-carriers. Given the additional flexibility the Commission is permitting for the provision of new broadcast services, it is not clear that this spectrum will be used for CMRS. In addition, the Lower 700 MHz Band spectrum is significantly encumbered and is likely to remain so during the DTV transition, especially by the operations of DTV incumbents who await relocation to the core DTV spectrum. Thus, compared to the Upper 700 MHz Commercial Band, there is even less reason to extend the spectrum cap to the Lower 700 MHz Band. Moreover, to count this spectrum against the spectrum cap would be inconsistent with the Commission's decision to sunset the cap three months after the statutory deadline for auctioning Lower 700 MHz Band licenses.

#### d. License Term; Renewal Expectancy

73. Consistent with § 27.13(b) of the Commission's rules, the Commission is establishing a license expiration date of January 1, 2015 for Lower 700 MHz Band licenses. Because licensees need additional time to develop and use this spectrum in light of its continued use by incumbent broadcasters, the Commission has set an expiration date that is eight years after the earliest date that incumbent broadcasters may be required to vacate the Lower 700 MHz Band. The Commission is setting a definite license term that terminates January 1, 2015. The Commission believes that eight additional years will provide new licensees a reasonable period in which to comply with the performance requirements set forth in the *R&O*. If the continued presence of a substantial number of incumbents remains beyond this date, the Commission will consider whether extensions are warranted at that time. For licensees that elect to commence new broadcast operations prior to January 1, 2007, their renewal deadline will be set at the end of an eight-year term following commencement of such broadcast operations.

74. The Commission also is adopting the right to a renewal expectancy established in § 27.14(b), 47 CFR 27.14(b), for non-broadcast services. To claim a renewal expectancy, a Lower 700 MHz Band renewal applicant involved in a comparative renewal

proceeding must demonstrate, at a minimum, the showing required in § 27.14(b) of the Commission's rules. In the event that a license is partitioned or disaggregated, the Commission will permit any partitionee or disaggregatee to hold its license for the remainder of the original licensee's license term and obtain a renewal expectancy on the same basis as other licensees in the Lower 700 MHz Band. All licensees meeting the Lower 700 MHz Band's performance requirements will be deemed to have met this element of the renewal expectancy requirement regardless of which of the construction options the licensee has chosen.

#### e. Performance Requirements

75. Consistent with the Commission's approach towards the Upper 700 MHz Commercial Band, the Commission will apply the construction requirement in § 27.14(a) of the Commission's rules to the Lower 700 MHz Band. See 47 CFR 27.14(a). Accordingly, a licensee must provide "substantial service" to its license service area no later than the end of its license term.

76. Section 27.14(a)'s construction requirement provides the flexibility required to accommodate the new and innovative services that are permitted by the Lower 700 MHz Band's reallocation. The substantial service standard is particularly appropriate for the Lower 700 MHz Band given the highly-encumbered nature of this particular spectrum. The Commission disagrees with those commenters that advocate stricter standards such as an unserved area approach. Because new licensees in different geographic areas will not be similarly situated due to the varying levels of incumbency, specific benchmarks for all new licensees would be inequitable. In contrast, the substantial service standard provides the Commission with flexibility to consider the particular circumstances of each licensee and how the level of incumbency has had an impact on the licensee's ability to build-out and commence service in its licensed area.

77. The Commission adopts the following safe harbors for licensees in the Lower 700 MHz Band to demonstrate substantial service: (1) The construction of four permanent links per one million people in the licensed service area of a licensee that chooses to offer fixed, point-to-point services; (2) the demonstration of coverage for 20 percent of the population of the licensed service area of a licensee that chooses to offer fixed, point-to-multipoint services; and (3) the demonstration of coverage for 20 percent of the population of the

licensed service area of a licensee that chooses to offer mobile services.

#### f. Partitioning and Disaggregation

78. The Commission will permit licensees in the Lower 700 MHz Band to partition their service areas and to disaggregate their spectrum in accordance with § 27.15 of the Commission's rules. See 47 CFR 27.15. Compared to an approach that restricts such transfers in the secondary market, the Commission believes that permitting partitioning and disaggregation in the Lower 700 MHz Band improves smaller entities' ability to overcome barriers to entry. The Commission does not agree with certain commenters that allowing licensees to partition and/or disaggregate their licensed spectrum fails to provide opportunities for small entities to enter and compete. As a part of the Commission's broader policy to facilitate efficient use of spectrum by its highest valued use, these allowances provide a mechanism by which all parties, including small businesses and rural telephone companies, can negotiate agreements to modify the geographic or spectral scope of any given license in the Lower 700 MHz Band. The Commission's decisions to adopt multiple blocks of spectrum and MSA/RSA-based service areas for 25 percent of the spectrum are specifically designed to identify an efficient starting point for small entities in this band.

79. A number of commenters recommend that the Commission permit spectrum leasing in the Lower 700 MHz Band. The Commission finds that a Lower 700 MHz Band licensee's right to lease its spectrum usage rights will be subject to decisions the Commission make in the Secondary Markets proceeding.

#### 4. Operating Rules

80. The Commission has considered operating rules for a full range of possible licensees in the Lower 700 MHz Band and believe part 27 provides an appropriate licensing framework for this spectrum. The part 27 rules provide for the potential application of specific operating provisions contained in other parts of the Commission's rules. See 47 CFR 27.3.

##### a. Forbearance

81. The Commission declines to adopt additional forbearance initiatives in this proceeding. Although the Commission solicited comment on the proper application of the Commission's forbearance authority with respect to the Lower 700 MHz Band, the Commission received no comments on the appropriate interpretation of the

forbearance criteria in this context and only general proposals concerning additional forbearance from regulatory provisions applicable to service providers operating on this spectrum. The Commission continues to invite suggestions on ways in which it can alleviate or streamline regulations that would otherwise be applicable to Lower 700 MHz Band services.

##### b. Equal Employment Opportunity

82. Consistent with the approach adopted in the *Upper 700 MHz First Report and Order*, the Commission finds that an applicant's Equal Employment Opportunity (EEO) requirements will depend on the type of service the applicant chooses to elect on its FCC Form 601. As explained in the *R&O*, the Commission's FCC Form 601 enables an applicant to choose one, or several, regulatory statuses, including common carrier, non-common carrier, private internal communications and/or broadcast services. All CMRS providers are subject to the Commission's EEO requirements in §§ 22.321 and 90.168 of the Commission's rules. The Commission also notes that CMRS providers are generally subject to the Commission's common carrier EEO obligations. See 47 CFR 1.815.

83. A licensee that provides broadcast service will be subject to the EEO rules contained in § 73.2080 of the Commission's rules. The U.S. Court of Appeals for the D.C. Circuit held a portion of the broadcast EEO rule unconstitutional and vacated the rule in *MD/DC/DE Broadcasters Associations v. FCC* (236 F.3d 13 (D.C. Cir.), rehearing denied, 253 F.3d 732 (D.C. Cir. 2001), *pet. for cert. filed*, *MMTCA v. MC/DC/DE Broadcasters Ass'n*, No. 01-639 (October 17, 2001)). The Commission thereafter suspended the EEO program requirements (but not the nondiscrimination requirement) for broadcasters, cable entities, and multichannel video program distributors (MVPDs) until further order of the Commission. That suspension order is still in effect. The Commission recently proposed new EEO requirements for broadcast, cable and MVPDs that would be consistent with the court's decision in *MD/DC/DE Broadcasters Associations*. Thus, licensees who elect to provide broadcast services will be required to comply with the nondiscrimination requirement currently in effect and any other EEO requirements that may subsequently be adopted by the Commission.

##### 5. Competitive Bidding Procedures

84. Pursuant to statutory mandate, competitive bidding procedures will be

used to assign licenses for spectrum in the Lower 700 MHz band.

a. Incorporation by Reference of the Part 1 Standardized Auction Rules

85. The Commission will use the general competitive bidding rules set forth in part 1, subpart Q, of its rules to conduct the auction of initial licenses in the Lower 700 MHz Band. The Commission's decision to adopt the part 1 rules is consistent with its ongoing effort to streamline the Commission's general competitive bidding rules for all radio services that are subject to competitive bidding and increase the efficiency of the competitive bidding process. Application of the part 1 rules will be subject to any modifications that the Commission may subsequently adopt.

86. The Commission will attribute casino gaming revenues in determining eligibility for small business preferences. The Commission's part 1 rules include an attribution rule that requires auction applicants to include gaming revenues in the calculations used to determine eligibility for small business status. The Commission adopted this policy in recognition that gaming revenues are exceptional revenues that, if not attributed to the applicant, could create an unfair competitive advantage with regard to all other applicants, and not just other Indian tribes. The Commission's attribution rules make no distinction among the types of businesses from which an attributable entity's gross revenues might arise, nor do they consider whether that entity is profitable. Given that gaming revenues are available for telecommunications uses, the Commission finds no basis to grant tribal entities an exemption from the attribution rule for gaming revenues. To the extent that tribal entities seek licenses with the intention to serve tribal lands, however, they may benefit from the Commission's policies and rules under which the Commission will award bidding credits in future auctions, including the Lower 700 MHz auction, for winning bidders who use licenses to deploy facilities and provide service to federally-recognized tribal areas that are either unserved by any telecommunications carrier or that have a telephone service penetration rate below 70 percent.

87. The Commission acknowledges certain commenters concerns regarding the use of combinatorial bidding procedures, but regards them as speculative at this time. The Commission notes that, consistent with statutory obligations, the Wireless Telecommunications Bureau (WTB) will

seek comment on auction-related procedural issues, including auction design, prior to the start of the Lower 700 MHz auction pursuant to WTB's existing delegated authority. This will provide WTB with an opportunity to weigh the benefits and disadvantages of any particular bidding design, among other auction-specific issues (e.g., minimum opening bids), prior to the start of the Lower 700 MHz Band auction.

b. Provisions for Designated Entities

88. The Commission will extend bidding preferences to small business entities that seek an opportunity to participate in an auction of Lower 700 MHz Band licenses. The Commission has long recognized that bidding preferences for qualifying bidders provides such bidders with an opportunity to compete successfully against large, well-financed entities. The Commission has also found that the use of tiered or graduated small business definitions is useful in furthering the Commission's mandate under 47 U.S.C. 309(j) to promote opportunities for and disseminate licenses to a wide variety of applicants.

89. The Commission will adopt the same two small business definitions for the EAG-based licenses in the Lower 700 MHz Band that were applied to the EAG-based licenses in the Upper 700 MHz Commercial Band. Specifically, with respect to all EAG-defined licenses in the Upper and Lower 700 MHz Bands, the Commission will define a "small business" as any entity with average annual gross revenues for the three preceding years not exceeding \$40 million, and a "very small business" as any entity with average annual gross revenues for the three preceding years not exceeding \$15 million. The Commission believes that the considerations that formed the basis for its decision in the Upper 700 MHz Band proceeding are equally applicable with respect to the larger, EAG-based licenses that the Commission is establishing in this decision.

90. The Commission concludes that a third small business definition should be extended to those Lower 700 MHz Band licenses that are defined on the basis of MSAs and RSAs. In light of the expressions of interest in this proceeding by small business and rural interests in favor of smaller license areas, the Commission agrees to use the third small business definition that was suggested in the *NPRM* to allow "small business and rural telecommunications providers to participate more meaningfully" in a Lower 700 MHz Band auction. The Commission

anticipates that new services that may be deployed in the smaller, non-EAG license areas could have different characteristics and capital requirements. Many of the same considerations that led the Commission to adopt smaller-sized licenses in the Lower 700 MHz Band also favor the use of a third small business size standard for those non-EAG licenses. Some new services that may be deployed in the smaller license areas may have lower capital requirements than for the larger EAG-based licenses. For example, these smaller license areas may be suited to applications with relatively low costs, such as fixed broadband wireless services which use only the "white areas" of a heavily-encumbered, smaller license area. In this regard, the Commission believes that this situation is analogous to that of the 24 GHz service, in which license areas were defined on the basis of EAs and a broad range of services were permitted. For these reasons, the Commission will use three small business definitions for the MSA and RSA-based licenses in the Lower 700 MHz Band, and will adjust the terms for size standards in this service accordingly. Thus, for services in the Lower 700 MHz Band, the Commission defines a "small business" as any entity with average annual gross revenues for the three preceding years not exceeding \$40 million, a "very small business" as any entity with average annual gross revenues for the three preceding years not exceeding \$15 million, and an "entrepreneur" as any entity with average annual gross revenues for the three preceding years not exceeding \$3 million. Qualifying small businesses will be entitled to a bidding credit of 15 percent, qualifying very small businesses will be entitled to a 25 percent bidding credit, and qualifying entrepreneurs will be entitled to a 35 percent bidding credit.

91. We do not agree with commenters that criticize the Commission's designated entity preference program on the grounds that it has not been successful in meeting its objectives. The Commission's analysis of the results of its auction of licenses in the 39 GHz band demonstrates that small businesses can and will successfully compete for licenses. In that auction, entities that had average gross revenues of not more than \$40 million for the three preceding years (including those that had average gross revenues of not more than \$15 million for the preceding three years) successfully bid for 849 licenses, or almost 40 percent of the licenses sold. Such small businesses also successfully bid for 21 of the 46 licenses in the

largest EAs (defined for this purpose as the top 25 percent of the EAs, as ranked by population). The Commission believes that the use of a third small entity definition may result in the dissemination of Lower 700 MHz Band licenses among an even wider range of small business entities, consistent with the Commission's obligations under 47 U.S.C. 309(j)(3)(B).

92. The Commission does not find that the Communications Act requires it to adopt an independent bidding credit for large telephone companies that serve rural areas. The consideration of this issue is guided by a line of Commission decisions in which the Commission has consistently found no basis for establishing an independent bidding credit for large telephone companies in rural areas. Large rural telcos have failed to demonstrate any barriers to capital formation similar to those faced by other designated entities. Rural telcos have access to low-cost financing through the National Rural Utilities Cooperative Finance Corporation, and may seek below-market rate lending through the Department of Agriculture's Rural Utilities Service. These financing options suggest that rural telephone companies may have greater ability than other designated entities to attract capital. The Commission also notes that, in conducting the analysis of its 39 GHz auction, all six qualified bidders that identified themselves on their short-form applications as rural telephone companies were successful at auction.

93. The Commission will apply unjust enrichment penalties to assignments of this spectrum. Congress has directed the Commission to establish rules that prevent unjust enrichment. Having recognized the potential for abuse of its designated entity preference policies, the Commission has established unjust enrichment rules to safeguard against speculation in the auction process and participation by entities that lack *bona fide* intent to offer communications services. The Commission does not rescind the entire bidding discount from a designated entity that partitions or disaggregates portions of its license to a non-qualifying entity. Rather, in such cases, the licensee is required to remit an unjust enrichment payment only in an amount equal to the proportion of the population in the partitioned area. The Commission notes that the question of the applicability of the unjust enrichment rules to leasing situations is under consideration in the Commission's Secondary Markets proceeding and defers its consideration of this issue to that proceeding.

94. The Commission remains committed to meeting the statutory

objectives of promoting economic opportunity and competition, avoiding excessive concentration of licenses, and ensuring access to new and innovative technologies by disseminating licenses among a wide variety of applicants, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women. The Commission stated that it will continue to track the rate of participation in the Commission's auctions by minority- and women-owned firms and evaluate this information with other data gathered to determine whether additional provisions to promote participation by minorities and women are warranted.

#### c. Public Notice of Initial Applications/Petitions to Deny

95. The Commission intends to follow the time periods set forth under § 1.2108 of the Commission's rules. See 47 CFR 1.2108. The Commission has recognized that, in most cases, a ten-day filing period serves the public interest by providing parties, including small businesses, more flexibility in challenging license awards than a five-day period. The Commission also confirms, however, that WTB may, in its discretion, shorten that period to five days, if exigent circumstances exist. In this regard, the Commission notes that the statutory auction deadline is approaching, and that it may be necessary to limit this period to comply with that deadline. In addition, the other time periods set forth in § 1.2108 will apply, including the requirement to allow at least seven days following the issuance of the public notice that long-form applications have been accepted for filing before acting on any such application.

#### 6. Measures to Facilitate Early Clearing of the Lower 700 MHz Band and Accelerate the DTV Transition

##### a. Voluntary Band-Clearing Policies

96. The Commission agrees with those commenters that argue that any efforts to clear this band must be purely voluntary. However, in light of certain differences between the Upper and Lower 700 MHz Bands, the Commission concludes that the Commission should employ a different approach from that established for the Upper 700 MHz Band. For instance, there is no public safety allocation in the Lower 700 MHz Band, and there is a significantly greater degree of broadcast incumbency relative to the Upper 700 MHz Band. In addition, the Commission notes that Congress has directed it to reclaim the Upper 700 MHz Band for public safety

and commercial use under an accelerated time frame, but did not accord the same priority to recovery of the Lower 700 MHz Band. Therefore, rather than apply the presumptions that the Commission established in the Upper 700 MHz Band for analyzing voluntary band-clearing proposals, the Commission will not adopt any rules, and will instead rely on the Commission's basic responsibility to consider any regulatory requests related to band clearing in the Lower 700 MHz Band on a case-by-case basis, considering all relevant public interest factors. Broadcasters seeking to implement early band-clearing agreements must generally comply with existing broadcast rules and policies. Accordingly, the Commission does not extend to the Lower 700 MHz Band the extended DTV construction period that was provided to certain single-channel broadcasters in connection with the arrangements for early clearing of the Upper 700 MHz Band.

##### b. Other Issues

97. Although the Commission did not seek comment in the *NPRM* on broader issues relating to the DTV transition process generally, a number of commenters urge the Commission to adopt proposals that they have been advocating in the Commission's DTV and DTV must-carry proceedings. The Commission believes that these requests in this proceeding do not raise distinctive or additional factual or policy considerations that justify departure from the broad determinations made or under consideration in those other proceedings. The Commission therefore defers consideration of those requests to the proper proceedings.

98. The Commission agrees that incumbent broadcasters and new 700 MHz licensees should not be constrained from developing new and innovative approaches to band clearing, however, the Commission declines to adopt a rule of general applicability for approving sharing arrangements at this time, particularly in light of the limited record on the issue. While the Commission does not adopt a general sharing rule at this time, the Commission will consider any such proposal on a case-by-case basis.

#### Final Regulatory Flexibility Act Analysis

99. As required by section 603 of the Regulatory Flexibility Act (RFA), an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in Appendix C of the *NPRM* in this proceeding. The Commission sought written public

comment on the proposals set forth in the *NPRM*, including comment on the *IRFA*. This Final Regulatory Flexibility Analysis (*FRFA*) complies with the *RFA*, as amended by the Contract with America Advancement Act of 1996 (*CWAAA*) (Public Law No. 104-121, 110 Stat. 847 (1996)).

#### *A. Need for, and Objectives of, the R&O*

100. In the *R&O*, the Commission adopts rules to reclaim and reallocate the Lower 700 MHz Band currently used for TV Channels 52-59, for new commercial services as part of the Commission's transition of TV broadcasting from analog to digital transmission systems, consistent with the statutory directives enacted in the Balanced Budget Act of 1997. This *R&O* reallocates the entire 48 megahertz of spectrum in the Lower 700 MHz Band to fixed and mobile services, while retaining the existing broadcast allocation. The *R&O* establishes technical criteria designed to protect incumbent television operations in the band during the DTV transition period, allows LPTV and TV translator stations to retain secondary status and operate in the band after the transition, and sets forth a mechanism by which pending broadcast applications may be amended to provide analog or digital service in the core television spectrum or to provide digital service on TV Channels 52-58. The decision to reallocate this band in a manner that will permit new licensees to provide a broad range of services was guided by the Commission's previously announced policies favoring flexible spectrum allocations. This reallocation is also consistent with the Commission's obligations under sections 303(y) and 309(j)(3) of the Communications Act.

101. The *R&O* also establishes service rules for the Lower 700 MHz Band using the flexible regulatory framework in part 27 of the Commission's rules. In particular, the band plan for the Lower 700 MHz Band divides this spectrum into three 12-megahertz blocks (with each block consisting of a pair of 6-megahertz segments) and two 6-megahertz blocks of contiguous, unpaired spectrum. The Commission will license the five blocks in the Lower 700 MHz Band plan as follows: the two 6-megahertz blocks of contiguous unpaired spectrum, as well as two of the three 12-megahertz blocks of paired spectrum, will be assigned over six EAGs; the remaining 12 megahertz block of paired spectrum will be licensed over 734 MSAs and Rural Service Areas RSAs. The service rules have been designed to promote the objectives identified in 47 U.S.C. 309(j), including

the development and rapid deployment of new technologies, products, and services for the benefit of the public; the promotion of economic opportunity and competition; the recovery of a portion of the value of the spectrum made available for commercial use; and the efficient and intensive use of the spectrum.

102. Although the decisions in the *R&O* were patterned on the approach adopted for the Upper 700 MHz Band, the *R&O* adopts a geographic area licensing approach to assign licenses in the Lower 700 MHz Band that includes smaller license areas than were established for the Upper 700 MHz Band. As with the Upper 700 MHz Band, the *R&O* for the Lower 700 MHz Band also uses relatively small spectrum block sizes. The 48 megahertz of spectrum that comprises the Lower 700 MHz Band will be licensed with two six-megahertz blocks of contiguous unpaired spectrum and two 12-megahertz blocks of paired spectrum over 6 EAGs. The remaining 12-megahertz block of paired spectrum will be licensed over 734 MSAs/RSAs.

103. The use of these small license areas also is intended to satisfy the Commission's obligations in prescribing characteristics of licenses to "promot[e] economic opportunity and competition and ensur[e] that new and innovative technologies are readily accessible to the American people by avoiding excessive concentration of licenses and by disseminating licenses among a wide variety of applicants, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women." 47 U.S.C. 309(j)(3)(B). Establishing such small license areas also furthers the Commission's obligation to "prescribe area designations and bandwidth assignments that promote " economic opportunity for a wide variety of applicants, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women." 47 U.S.C. 309(j)(4)(C).

104. The *R&O* also establishes competitive bidding rules and voluntary clearing procedures for the Lower 700 MHz Band. Consistent with the Commission's responsibility under 47 U.S.C. 309(j) to promote opportunities for, and disseminate licenses to, a wide variety of applicants, the *R&O* also adopts small business size standards and bidding preferences for qualifying bidders that will provide such bidders with opportunities to compete successfully against large, well-financed entities. In particular, for services in the Lower 700 MHz Band, the Commission

has defined a "small business" as any entity with average annual gross revenues for the three preceding years not exceeding \$40 million, a "very small business" as any entity with average annual gross revenues for the three preceding years not exceeding \$15 million, and an "entrepreneur" as any entity with average annual gross revenues for the three preceding years not exceeding \$3 million. The Commission will use its standard schedule of bidding credits, which may be found at § 1.2110(f)(2) of the Commission's rules. See 47 CFR 1.2110(f)(2). The entrepreneur standard and associated 35 percent bidding credit will, however, not apply to the larger EAG-based licenses in the Lower 700 MHz Band. Drawing on recent precedent involving another flexible-use service (the 24 GHz service), the Commission found that "[b]ecause the capital costs of operational facilities in the " band are likely to vary widely, the Commission believe that the use of three small business definitions will be useful in promoting opportunities for a wide variety of applicants \* \* \*." The Commission has concluded that these bidding credits will provide adequate opportunities for small businesses to participate in the Lower 700 MHz Band auction.

105. The *R&O* also establishes a policy of permitting incumbent broadcasters and new licensees to reach voluntary agreements that would result in the early clearing of incumbents from the Lower 700 MHz spectrum. These policies are intended to further the Commission's objective of establishing rules that will facilitate, rather than hinder, the clearing of incumbent broadcasters from this spectrum in a manner consistent with the Commission's DTV transition policy goals.

#### *B. Summary of Significant Issues Raised by Public Comments in Response to the IRFA*

106. Only one commenter, the National Telephone Cooperative Association (NTCA), specifically raises issues in response to the *IRFA*. NTCA urges the Commission to assign spectrum in the Lower 700 MHz Band across small geographic areas, arguing that small businesses such as rural telephone companies cannot compete against large carriers in auctions for large geographic areas. According to NTCA, assigning at least a portion of this spectrum across small geographic areas will allow small providers an opportunity to bid on, acquire, and develop service in the more limited areas in which they wish to operate. In

response to comments made by NTCA and other small business interests on this issue, the Commission decided to use the smallest geographic area option that was described in the *NPRM*, the 734 MSAs and RSAs, for 12 of the 48 megahertz of spectrum in the Lower 700 MHz Band.

### *C. Description and Estimate of the Number of Small Entities to Which Rules Will Apply*

107. The RFA directs agencies to provide a description of, and, where feasible, an estimate of, the number of small entities to which the rule will apply or an explanation of why no such estimate is available. The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction" under section 3 of the Small Business Act. In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act. Under the Small Business Act, a "small business concern" is one which: (1) Is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA. According to SBA reporting data, there were approximately 4.44 million small business firms nationwide in 1992. A small organization is generally "any not-for-profit enterprise which is independently owned and operated and is not dominant in its field." Nationwide, as of 1992, there were approximately 275,801 small organizations. "Small governmental jurisdiction" generally means "governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than 50,000." As of 1992, there were approximately 85,006 local governments in the United States. This number includes 38,978 counties, cities, and towns; of these, 37,566, or 96 percent, have populations of fewer than 50,000. The Census Bureau estimates that this ratio is approximately accurate for all governmental entities. The Commission therefore estimates that, of the 85,006 governmental entities, 81,600 (96 percent) are small entities. The Commission further describes and estimates the number of small entity licensees and regulatees that may be affected by the rules adopted in the *R&O*.

108. The policies and rules adopted in the *R&O* and discussed in this FRFA will affect all entities, including small entities, that seek to acquire licenses in wireless services in the 698–746 MHz

band, or are television broadcasters in this band.

109. *Wireless services.* The policies and rules adopted in this *R&O* affect all small entities that seek to acquire licenses in wireless services in the Lower 700 MHz Band currently used for television broadcasts on Channels 52–59, or are incumbent television broadcasters on Channels 52–59. The Commission has adopted small business size standards that define a "small business" as any entity with average annual gross revenues for the three preceding years not exceeding \$40 million, a "very small business" as any entity with average annual gross revenues for the three preceding years not exceeding \$15 million, and an "entrepreneur" as any entity with average annual gross revenues for the three preceding years not exceeding \$3 million. (The entrepreneur standard does not extend to the larger EAG-based licenses in the Lower 700 MHz Band.) The SBA has approved this small business size standard for the Lower 700 MHz auction. However, the Commission cannot know until the auction begins how many entities will seek entrepreneur, small business, or very small business status. The Commission will allow partitioning and disaggregation, yet it cannot determine in advance how many licensees will partition their license areas or disaggregate their spectrum blocks. In view of the Commission's lack of knowledge of these factors, it is therefore assumed that, for purposes of the Commission's evaluations and conclusions in the FRFA, all of the prospective licenses are small entities, as that term is defined by the SBA or the Commission's small business definitions for these bands.

110. *Television Broadcast.* The SBA defines a television broadcasting station as a small business where it is independently owned and operated, is not dominant in its field of operation, and has no more than \$10.5 million in annual receipts. Television broadcasting stations consist of establishments primarily engaged in broadcasting visual programs by television to the public, except cable and other pay television services. Included in this industry are commercial, religious, educational, and other television stations. Also included are establishments primarily engaged in television broadcasting and which produce taped television program materials. There were 1,509 television stations operating in the United States in 1992, of which 1,155 (76.5 percent) produced less than \$10.0 million in revenue. As of May 31, 1998, official

Commission records indicate that 1,579 full power television stations, 2,089 low power television stations, and 4,924 television translator stations were licensed. Using the percentage of television broadcasting licensees that were small entities in 1992 (76.5 percent) and the 1998 records indicating 1,579 full power stations, the Commission concludes that there are approximately 1,208 full power television stations that are small entities.

111. The rules adopted in the *R&O* may affect approximately 1,663 television stations currently operating in the Lower 700 MHz Band, approximately 1,281 of which are considered small businesses. In addition, the rules adopted in the *R&O* will affect some 12,717 radio stations currently operating in this band, approximately 12,209 of which are small businesses. These estimates may overstate the number of small entities because the revenue figures on which they are based do not include or aggregate revenues from non-television or non-radio affiliated companies. There are also 2,366 LPTV stations. Given the nature of this service, the Commission presume that all LPTV licensees qualify as small entities under the SBA definition.

112. *Auxiliary or Special Broadcast.* This service involves a variety of transmitters, generally used to relay broadcast programming to the public (through translator and booster stations) or within the program distribution chain (from a remote news gathering unit back to the station). The Commission has not developed a definition of small entities applicable to broadcast auxiliary licensees. The applicable SBA definition is that noted previously, under the SBA rules applicable to television broadcasting stations. The Commission estimates that there are approximately 2,700 translators and boosters. The Commission does not collect financial information on any broadcast facility, and the Department of Commerce does not collect financial information on these auxiliary broadcast facilities. The Commission believes that most, if not all, of these auxiliary facilities could be classified as small businesses if viewed apart from any associated broadcasters. The Commission also recognizes that most commercial translators and boosters are owned by a parent station which, in some cases, would be covered by the revenue definition of small business entity. These stations would likely have annual revenues that exceed the SBA maximum to be designated as a small business (\$10.5 million for a TV

station). Furthermore, they do not meet the Small Business Act's definition of a "small business concern" because they are not independently owned and operated.

#### *D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements*

113. Entities interested in acquiring initial licenses for new services in the 698–746 MHz band will be required to submit short form applications (FCC Form 175) to participate in an auction and high bidders will be required to apply for their individual licenses. Also, commercial licenses will be required to make showings that they are in compliance with construction requirements, file applications for license renewals, and make certain other filings as required by the Communications Act and Commission regulations. Entities seeking to acquire licenses (or disaggregated or partitioned portions of licenses) from Commission licensees in the post-auction market are also required to submit long-form applications (FCC Form 601) seeking Commission authority to complete any such transactions. In addition to the general licensing requirements of part 27 of the Commission's rules, other parts may be applicable to commercial licensees, depending on the nature of service provided. For example, commercial licensees proposing to provide broadcast services on these bands may be required to comply with all or part of the broadcast-specific regulations in part 73 of the Commission's rules.

114. By this *R&O*, the Commission requires licensees to notify the Commission within 30 days of a change in regulatory status between common carrier and/or non-common carrier. In addition, because the Commission considers partitioning and disaggregation to be a form of license assignment, the Commission requires such action to receive Commission approval via application for assignment on FCC Form 603. With regard to alien ownership, the Commission requires licensees to amend their FCC Form 602 to reflect any changes in foreign ownership information, together with the initial information required by FCC Form 601.

#### *E. Steps Taken To Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered*

115. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its decision, which may include the following four alternatives (among

others): (1) The establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.

116. Commenters in this proceeding recommend a variety of steps the Commission may take to lessen the impact on small businesses while assigning spectrum in the Lower 700 MHz Band. For example, the majority of commenters advocate the use of small geographic license areas, especially MSAs and RSAs, so that small providers may avoid having to bid on areas that are larger than they need. A few commenters suggest the Commission could benefit small providers in a similar manner by assigning the spectrum across multiple blocks, and one party urges a set-aside for small businesses. Another commenter argues that spectrum aggregation limits must be maintained so as to prevent an excessive concentration of licenses by large providers that may work against the interests of other competitors.

117. With these RFA requirements and comments from the record in mind, the Commission adopts rules in the *R&O* that are designed to reduce regulatory burdens, promote innovative services and encourage flexible use of this spectrum. They increase economic opportunities to a variety of spectrum users, including small businesses. Specifically, the Commission reallocates the entire 48 megahertz of spectrum in the 698–746 MHz band to fixed and mobile services, while retaining the existing broadcast allocation. New licensees, including smaller entities, will enjoy flexible use for the full range of proposed allocated services consistent with necessary interference requirements.

118. In addition, the Commission adopts rules on spectrum block size and geographic areas that may be of even greater significance for small entities. For example, with respect to the size of spectrum blocks for licensees, the Commission declines to allocate the 48 megahertz over a single block, instead choosing an allocation over multiple blocks of six and twelve megahertz each. The Commission also permits disaggregation and partitioning of these spectrum blocks. With respect to the size of geographic license areas, the Commission allocates licenses over large regional EAGs as well as small

MSAs/RSAs. As small business commenters have observed, a MSA/RSA-based license area may be a particularly appropriate alternative for small providers that wish to avoid having to acquire a larger license area that they must subsequently partition. At the same time, consistent with the Commission's flexible approach, the Commission allows both partitioning and aggregation of all of these licenses, such that licensees may increase or decrease the size of their service areas to better meet market demands. Because the Commission believes that the use of multiple spectrum blocks and MSAs/RSAs effectively meets the needs of small providers, it therefore declines to adopt other suggested alternatives, such as spectrum aggregation limits, in this band.

119. The Commission further notes that the *R&O* adopts small business definitions and preferences for qualifying bidders in the 698–746 MHz band. These standards define an "entrepreneur" as any entity with average annual gross revenues for the three preceding years not exceeding \$40 million, a "small business" as any entity with average annual gross revenues for the three preceding years not exceeding \$15 million, and a "very small business" as any entity with average annual gross revenues for the three preceding years not exceeding \$3 million. Although the Commission had initially proposed the adoption of only two small business definitions, it has found that the use of a third small business definition for MSA/RSA-based licenses will allow small business and rural telecommunications providers to participate more meaningfully in a Lower 700 MHz Band auction.

120. Finally, the *R&O* establishes a policy of permitting incumbent broadcasters and new licensees to reach voluntary agreements that would result in the early clearing of the Lower 700 MHz spectrum. Broadcasters electing to enter into such agreements may be required to seek Commission approvals in order to implement such agreements. Such regulatory requests may be submitted using existing application forms. Because the Commission's policy is entirely voluntary, broadcasters and new licensees, including small entities, are under no obligation to enter into such early clearing arrangements or to seek Commission approval of same.

121. The regulatory burdens contained in the *R&O*, such as filing applications on appropriate forms, are necessary in order to ensure that the public receives the benefits of innovative new services, or enhanced existing services, in a prompt and

efficient manner. The Commission will continue to examine alternatives in the future with the objectives of eliminating unnecessary regulations and minimizing any significant economic impact on small entities.

122. *Report to Congress:* The Commission will send a copy of this *R&O*, including this FRFA, in a report to be sent to Congress pursuant to the Congressional Review Act, 5 U.S.C. 801(a)(1)(A). In addition, the Commission will send a copy of this *R&O*, including this FRFA, to the Chief Counsel for Advocacy of the Small Business Administration. A copy of the *R&O* and FRFA (or summaries thereof) will also be published in the **Federal Register**. See 5 U.S.C. 604(b).

#### **Paperwork Reduction Act of 1995 Analysis**

123. This *R&O* contains either a new or modified information collection. The Commission is seeking immediate approval for the information collection contained herein pursuant to the "emergency processing" provisions of the Paperwork Reduction Act of 1995. See 5 CFR 1320.13. The Commission will publish a document in the **Federal Register** announcing the effective date of the information collection.

#### **Procedural Matters and Ordering Clauses**

124. Pursuant to sections 1, 2, 4(i), 5(c), 7, 201, 202, 208, 214, 301, 302, 303, 307, 308, 309, 310, 311, 314, 316, 319, 324, 331, 332, 333, 336, 614 and 615 of

the Communications Act of 1934, as amended, 47 U.S.C. 151, 152, 154(i), 155(c), 157, 201, 202, 208, 214, 301, 302a, 303, 307, 308, 309, 310, 311, 314, 316, 319, 324, 331, 332, 333, 336, 534, 535, this *R&O* is hereby ADOPTED and parts 2, 27 and 73 of the Commission's rules, 47 CFR parts 2, 27 and 73, ARE AMENDED to establish service rules for the 698–746 MHz band, as set forth in the *R&O*, effective April 8, 2002. The information collection contained in these rules will become effective upon OMB approval.

125. *Authority is delegated* to the Mass Media Bureau to implement the policies for the introduction of new wireless services and to promote the early transition of incumbent analog television licensees to DTV service to the extent discussed in the *R&O*.

126. A 45-day filing window period will commence on January 22, 2002 and will end March 8, 2002 for applicants to amend their pending proposals in accordance with the policies and procedures set forth in the *R&O*.

127. The Commission's Consumer Information Bureau, Reference Information Center, shall send a copy of this *R&O*, including the FRFA, to the Chief Counsel for Advocacy of the Small Business Administration.

#### **List of Subjects**

##### *47 CFR Part 2*

Radio, Television.

##### *47 CFR Part 27*

Communications common carriers, Radio.

##### *47 CFR Part 73*

Radio, Television.

Federal Communications Commission.

**William F. Caton,**  
*Acting Secretary.*

#### **Rule Changes**

For the reasons discussed in the preamble, the Federal Communications Commission amends 47 CFR parts 2, 27, and 73 as follows:

#### **PART 2—FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS**

1. The authority citation for part 2 continues to read as follows:

**Authority:** 47 U.S.C. 154, 302a, 303 and 336, unless otherwise noted.

2. Section 2.106, the Table of Frequency Allocations, is amended as follows:

a. Revise page 37.

b. In the International Footnotes under heading I., revise footnotes S5.293, S5.296, and S5.297.

c. In the list of non-Government (NG) Footnotes, revise footnotes NG149 and NG159.

#### **§ 2.106 Table of Frequency Allocations.**

\* \* \* \* \*

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International Table		United States Table		FCC Rule Part(s)	
Region 1	Region 2	Region 3	Federal Government	Non-Federal Government	
470-790 BROADCASTING	470-512 BROADCASTING Fixed Mobile	470-585 FIXED MOBILE BROADCASTING	470-608	470-512 BROADCASTING NG128 NG149 FIXED NG127 LAND MOBILE NG66 NG114	Public Mobile (22) Broadcast Radio (TV) (73) Auxiliary Broadcasting (74) Private Land Mobile (90)
	S5.292 S5.293	S5.291 S5.298		512-608 BROADCASTING NG128 NG149	Broadcast Radio (TV) (73) Auxiliary Broadcasting (74)
	512-608 BROADCASTING	S5.291 S5.298			
	S5.297	585-610 FIXED MOBILE BROADCASTING RADIONAVIGATION			
	608-614 RADIO ASTRONOMY Mobile-satellite except aeronautical mobile-satellite (Earth-to-space)	S5.149 S5.305 S5.306 S5.307	608-614 RADIO ASTRONOMY US74 LAND MOBILE US350		Personal (95)
	614-806 BROADCASTING Fixed Mobile	610-890 FIXED MOBILE S5.317A BROADCASTING	US246		
			614-890	614-698 BROADCASTING NG128 NG149	Broadcast Radio (TV) (73) Auxiliary Broadcasting (74)
				698-746 BROADCASTING NG128 FIXED MOBILE NG159	Wireless Communications (27) Broadcast Radio (TV) (73) Auxiliary Broadcasting (74)

470-849 MHz (UHF)

Page 37

International Footnotes

\* \* \* \* \*

I. New "S" Numbering Scheme

\* \* \* \* \*

55.293 Different category of service: in Canada, Chile, Colombia, Cuba, the United States, Guyana, Honduras, Jamaica, Mexico, Panama and Peru, the allocation of the bands 470-512 MHz and 614-806 MHz to the fixed and mobile services is on a primary basis (see No. S5.33), subject to agreement obtained under No. S9.21. In Argentina and Ecuador, the allocation of the band 470-512 MHz to the fixed and mobile services is on a primary basis (see No. S5.33), subject to agreement obtained under No. S9.21.

\* \* \* \* \*

55.296 Additional allocation: in Germany, Austria, Belgium, Cyprus, Denmark, Spain, Finland, France, Ireland, Israel, Italy, Libya, Lithuania, Malta, Morocco, Monaco, Norway, the Netherlands, Portugal, Syria, the United Kingdom, Sweden, Switzerland, Swaziland and Tunisia, the band 470-790 MHz is also allocated on a secondary basis to the land mobile service, intended for applications ancillary to broadcasting. Stations of the land mobile service in the countries listed in this footnote shall not cause harmful interference to existing or planned stations operating in accordance with the Table of Frequency Allocations in countries other than those listed in this footnote.

55.297 Additional allocation: in Costa Rica, Cuba, El Salvador, the United States, Guatemala, Guyana, Honduras, Jamaica and Mexico, the band 512-608 MHz is also allocated to the fixed and mobile services on a primary basis, subject to agreement obtained under No. S9.21.

\* \* \* \* \*

Non-Federal Government (NG) Footnotes

\* \* \* \* \*

NG149 The frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz, 470-512 MHz, 512-608 MHz, and 614-698 MHz are also allocated to the fixed service to permit subscription television operations in accordance with part 73 of the rules.

\* \* \* \* \*

NG159 Full power analog television stations licensed and new digital television (DTV) broadcasting operations in the band 698-806 MHz shall be entitled to protection from harmful interference until the end of the DTV transition period. Low power television and television translators in

the band 746-806 MHz must cease operations in the band at the end of the DTV transition period. Low power television and television translators in the band 698-746 MHz are secondary to all other operations in the band 698-746 MHz.

\* \* \* \* \*

PART 27—MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES

3. The authority citation for part 27 continues to read as follows:

Authority: 47 U.S.C. 154, 301, 302, 303, 307, 309, 332, 336, and 337 unless otherwise noted.

4. Section 27.1 is amended by adding paragraph (b)(3) to read as follows:

§ 27.1 Basis and purpose.

\* \* \* \* \*

- (b) \* \* \*
(3) 698-746 MHz.

\* \* \* \* \*

5. Section 27.3 is amended by redesignating paragraph (n) as paragraph (p), and by adding new paragraphs (n) and (o) to read as follows:

§ 27.3 Other applicable rule parts.

\* \* \* \* \*

(n) Part 73. This part sets forth the requirements and conditions applicable to radio broadcast services.

(o) Part 90. This part sets forth the requirements and conditions applicable to private land mobile radio services.

\* \* \* \* \*

6. Section 27.5 is amended by adding paragraph (c) to read as follows:

§ 27.5 Frequencies.

\* \* \* \* \*

(c) 698-746 MHz band. The following frequencies are available for licensing pursuant to this part in the 698-746 MHz band:

(1) Three paired channel blocks of 12 megahertz each are available for assignment as follows:

Block A: 698-704 MHz and 728-734 MHz;

Block B: 704-710 MHz and 734-740 MHz; and

Block C: 710-716 MHz and 740-746 MHz.

(2) Two unpaired channel blocks of 6 megahertz each are available for assignment as follows:

Block D: 716-722 MHz; and

Block E: 722-728 MHz.

7. Section 27.6 is amended by adding paragraph (c) to read as follows:

§ 27.6 Service areas.

\* \* \* \* \*

(c) 698-746 MHz band. WCS service areas for the 698-746 MHz band are as follows.

(1) Service areas for Blocks A, B, D, and E in the 698-746 MHz band are based on Economic Area Groupings (EAGs) as defined in paragraph (b)(2) of this section.

(2) Service areas for Block C in the 698-746 MHz band are based on cellular markets comprising Metropolitan Statistical Areas (MSAs) and Rural Service Areas (RSAs) as defined by Public Notice Report No. CL-92-40 "Common Carrier Public Mobile Services Information, Cellular MSA/RSA Markets and Counties," dated January 24, 1992, DA 92-109, 7 FCC Rcd 742 (1992), with the following modifications:

(i) The service areas of cellular markets that border the U.S. coastline of the Gulf of Mexico extend 12 nautical miles from the U.S. Gulf coastline.

(ii) The service area of cellular market 306 that comprises the water area of the Gulf of Mexico extends from 12 nautical miles off the U.S. Gulf coast outward into the Gulf.

8. Section 27.10 is amended by revising paragraphs (a), (b), and (c)(1)(ii) to read as follows:

§ 27.10 Regulatory status.

\* \* \* \* \*

(a) Single authorization.

Authorization will be granted to provide any or a combination of the following services in a single license: common carrier, non-common carrier, private internal communications, and broadcast services. A licensee may render any kind of communications service consistent with the regulatory status in its license and with the Commission's rules applicable to that service. An applicant or licensee may submit a petition at any time requesting clarification of the regulatory status for which authorization is required to provide a specific communications service.

(b) Designation of regulatory status in initial application. An applicant shall specify in its initial application if it is requesting authorization to provide common carrier, non-common carrier, private internal communications, or broadcast services, or a combination thereof.

(c) \* \* \*

(1) \* \* \*

(ii) Add to the pending request in order to obtain common carrier, non-common carrier, private internal communications, or broadcast services status, or a combination thereof, in a single license.

\* \* \* \* \*

9. Section 27.11 is amended by adding paragraph (d) to read as follows:

**§ 27.11 Initial authorization.**

\* \* \* \* \*

(d) *698–746 MHz band.* Initial authorizations for the 698–746 MHz band shall be for 6 or 12 megahertz of spectrum in accordance with § 27.5(c).

(1) Authorizations for Blocks A and B, consisting of two paired channels of 6 megahertz each, will be based on those geographic areas specified in § 27.6(c)(1).

(2) Authorizations for Block C, consisting of two paired channels of 6 megahertz each, will be based on those geographic areas specified in § 27.6(c)(2).

(3) Authorizations for Blocks D and E, consisting of an unpaired channel block of 6 megahertz each, will be based on those geographic areas specified in § 27.6(c)(1).

10. Section 27.13 is amended by revising paragraph (b) to read as follows:

**§ 27.13 License period.**

\* \* \* \* \*

(b) *698–764 MHz and 776–794 MHz bands.* Initial authorizations for the 698–764 MHz and 776–794 MHz bands will extend until January 1, 2015, except that a part 27 licensee commencing broadcast services will be required to seek renewal of its license for such services at the termination of the eight-year term following commencement of such operations.

11. Section 27.50 is amended by redesignating paragraph (c) as paragraph (d), adding a new paragraph (c), and revising the heading of Table 1, which follows newly redesignated paragraph (d), to read as follows:

**§ 27.50 Power and antenna height limits.**

\* \* \* \* \*

(c) The following power and antenna height requirements apply to stations transmitting in the 698–746 MHz band:

(1) Fixed and base stations are limited to a maximum effective radiated power (ERP) of 50 kW, with the limitation on antenna heights as follows:

(i) Fixed and base stations with an ERP of 1000 watts or less must not exceed an antenna height of 305 m height above average terrain (HAAT) except when the power is reduced in accordance with Table 1 of this section;

(ii) The antenna height for fixed and base stations with an ERP greater than 1000 watts but not exceeding 50 kW is limited only to the extent required to satisfy the requirements of § 27.55(b).

(2) Control and mobile stations are limited to 30 watts ERP.

(3) Portable stations (hand-held devices) are limited to 3 watts ERP.

(4) Maximum composite transmit power shall be measured over any interval of continuous transmission using instrumentation calibrated in terms of RMS-equivalent voltage. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, etc., so as to obtain a true maximum composite measurement for the emission in question over the full bandwidth of the channel.

(5) Licensees intending to operate a base or fixed station at a power level greater than 1 kW ERP must provide advanced notice of such operation to the Commission and to licensees authorized in their area of operation. Licensees that must be notified are all licensees authorized under this part to operate a base or fixed station on an adjacent spectrum block at a location within 75 km of the base or fixed station operating at a power level greater than 1 kW ERP. Notices must provide the location and operating parameters of the base or fixed station operating at a power level greater than 1 kW ERP, including the station's ERP, antenna coordinates, antenna height above ground, and vertical antenna pattern, and such notices must be provided at least 90 days prior to the commencement of station operation.

\* \* \* \* \*

Table 1—Permissible Power and Antenna Heights for Base and Fixed Stations in the 698–764 MHz and 777–792 MHz Bands

\* \* \* \* \*

12. Section 27.53 is amended by redesignating paragraph (f) as paragraph (g), and adding a new paragraph (f) to read as follows:

**§ 27.53 Emission limits.**

\* \* \* \* \*

(f) For operations in the 698–746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least  $43 + 10 \log(P)$  dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

\* \* \* \* \*

13. Section 27.55 is revised to read as follows:

**§ 27.55 Signal strength limits.**

(a) *Field strength limits.* For the following bands, the predicted or measured median field strength at any location on the geographical border of a licensee's service area shall not exceed the value specified unless the adjacent affected service area licensee(s) agree(s) to a different field strength. This value applies to both the initially offered service areas and to partitioned service areas.

(1) 2305–2320 and 2345–2360 MHz bands: 47 dBµ V/m.

(2) 698–764 and 776–794 MHz bands: 40 dBµ V/m.

(b) *Power flux density limit.* For base and fixed stations operating in the 698–746 MHz band, with an effective radiated power (ERP) greater than 1 kW, the power flux density that would be produced by such stations through a combination of antenna height and vertical gain pattern must not exceed 3000 microwatts per square meter on the ground over the area extending to 1 km from the base of the antenna mounting structure.

14. Section 27.57 is amended by designating the existing text as paragraph (a) and adding a new paragraph (b) to read as follows:

**§ 27.57 International coordination.**

\* \* \* \* \*

(b) Operation in the 698–764 MHz and 776–794 MHz bands is subject to international agreements between Mexico and Canada. Unless otherwise modified by international treaty, licenses must not cause interference to, and must accept harmful interference from, television broadcast operations in Mexico and Canada.

15. Section 27.60 is amended by revising introductory text, paragraphs (a)(1) and (b) to read as follows:

**§ 27.60 TV/DTV interference protection criteria.**

Base, fixed, control, and mobile transmitters in the 698–764 MHz and 776–794 MHz frequency bands must be operated only in accordance with the rules in this section to reduce the potential for interference to public reception of the signals of existing TV and DTV broadcast stations transmitting on TV Channels 51 through 68.

(a) \* \* \*

(1) The minimum D/U ratio for co-channel stations is:

(i) 40 dB at the hypothetical Grade B contour (64 dBµ V/m) (88.5 kilometers (55 miles)) of the TV station;

(ii) For transmitters operating in the 698–746 MHz frequency band, 23 dB at the equivalent Grade B contour (41 dBµ V/m) (88.5 kilometers (55 miles)) of the DTV station; or

(iii) For transmitters operating in the 746–764 MHz and 776–794 MHz frequency bands, 17 dB at the equivalent Grade B contour (41 dB $\mu$  V/m) (88.5 kilometers (55 miles)) of the DTV station.

\* \* \* \* \*

(b) *TV stations and calculation of contours.* The methods used to calculate TV contours and antenna heights above average terrain are given in §§ 73.683 and 73.684 of this chapter. Tables to determine the necessary minimum distance from the 698–764 MHz or 776–794 MHz station to the TV/DTV station, assuming that the TV/DTV station has a hypothetical or equivalent Grade B contour of 88.5 kilometers (55 miles), are located in § 90.309 of this chapter and labeled as Tables B, D, and E. Values between those given in the tables may be determined by linear interpolation. Distances for station parameters greater than those indicated in the tables should be calculated in accordance with the required D/U ratios, as provided in paragraph (a) of this section. The locations of existing and proposed TV/DTV stations during the period of transition from analog to digital TV service are given in part 73 of this chapter and in the final proceedings of MM Docket No. 87–268.

(1) Licensees of stations operating within the ERP and HAAT limits of § 27.50 must select one of four methods to meet the TV/DTV protection requirements, subject to Commission approval:

(i) Utilize the geographic separation specified in Tables B, D, and E of § 90.309 of this chapter, as appropriate;

(ii) When station parameters are greater than those indicated in the tables, calculate geographic separation in accordance with the required D/U ratios, as provided in paragraph (a) of this section;

(iii) Submit an engineering study justifying the proposed separations based on the actual parameters of the land mobile station and the actual parameters of the TV/DTV station(s) it is trying to protect; or,

(iv) Obtain written concurrence from the applicable TV/DTV station(s). If this method is chosen, a copy of the agreement must be submitted with the application.

(2) The following is the method for geographic separations.

(i) Base and fixed stations that operate in the 746–764 MHz and 777–792 MHz bands having an antenna height (HAAT) less than 152 m. (500 ft.) shall afford protection to co-channel and adjacent channel TV/DTV stations in accordance with the values specified in Table B (co-

channel frequencies based on 40 dB protection) and Table E (adjacent channel frequencies based on 0 dB protection) in § 90.309 of this chapter. Base and fixed stations that operate in the 698–746 MHz band having an antenna height (HAAT) less than 152 m. (500 ft.) shall afford protection to adjacent channel DTV stations in accordance with the values specified in Table E in § 90.309 of this chapter, shall afford protection to co-channel DTV stations by providing 23 dB protection to such stations' equivalent Grade B contour (41 dB $\mu$  V/m), and shall afford protection to co-channel and adjacent channel TV stations in accordance with the values specified in Table B (co-channel frequencies based on 40 dB protection) and Table E (adjacent channel frequencies based on 0 dB protection) in § 90.309 of this chapter. For base and fixed stations having an antenna height (HAAT) between 152–914 meters (500–3,000 ft.) the effective radiated power must be reduced below 1 kilowatt in accordance with the values shown in the power reduction graph in Figure B in § 90.309 of this chapter. For heights of more than 152 m. (500 ft.) above average terrain, the distance to the radio path horizon will be calculated assuming smooth earth. If the distance so determined equals or exceeds the distance to the hypothetical or equivalent Grade B contour of a co-channel TV/DTV station (*i.e.*, it exceeds the distance from the appropriate Table in § 90.309 of this chapter to the relevant TV/DTV station), an authorization will not be granted unless it can be shown in an engineering study (*see* paragraph (b)(1)(iii) of this section) that actual terrain considerations are such as to provide the desired protection at the actual Grade B contour (64 dB $\mu$  V/m for TV and 41 dB $\mu$  V/m for DTV stations) or unless the effective radiated power will be further reduced so that, assuming free space attenuation, the desired protection at the actual Grade B contour (64 dB $\mu$  V/m for TV and 41 dB $\mu$  V/m coverage contour for DTV stations) will be achieved. Directions for calculating powers, heights, and reduction curves are listed in § 90.309 of this chapter for land mobile stations. Directions for calculating coverage contours are listed in §§ 73.683 through 73.685 of this chapter for TV stations and in § 73.625 of this chapter for DTV stations.

(ii) Control, fixed, and mobile stations (including portables) that operate in the 776–777 MHz and 792–794 MHz bands and control and mobile stations (including portables) that operate in the 698–746 MHz, 747–762 MHz and 777–

792 MHz bands are limited in height and power and therefore shall afford protection to co-channel and adjacent channel TV/DTV stations in the following manner:

(A) For control, fixed, and mobile stations (including portables) that operate in the 776–777 MHz and 792–794 MHz bands and control and mobile stations (including portables) that operate in the 747–762 MHz and 777–792 MHz band, co-channel protection shall be afforded in accordance with the values specified in Table D (co-channel frequencies based on 40 dB protection for TV stations and 17 dB for DTV stations) in § 90.309 of this chapter.

(B) For control and mobile stations (including portables) that operate in the 698–746 MHz band, co-channel protection shall be afforded to TV stations in accordance with the values specified in Table D (co-channel frequencies based on 40 dB protection) and to DTV stations by providing 23 dB protection to such stations' equivalent Grade B contour (41 dB $\mu$  V/m).

(C) For control, fixed, and mobile stations (including portables) that operate in the 776–777 MHz and 792–794 MHz bands and control and mobile stations (including portables) that operate in the 698–746 MHz, 747–762 MHz, and 777–792 MHz band, adjacent channel protection shall be afforded by providing a minimum distance of 8 kilometers (5 miles) from all adjacent channel TV/DTV station hypothetical or equivalent Grade B contours (adjacent channel frequencies based on 0 dB protection for TV stations and –23 dB for DTV stations).

(D) Since control, fixed, and mobile stations may affect different TV/DTV stations than the associated base or fixed station, particular care must be taken by applicants/licensees to ensure that all appropriate TV/DTV stations are considered (*e.g.*, a base station may be operating within TV Channel 62 and the mobiles within TV Channel 67, in which case TV Channels 61, 62, 63, 66, 67 and 68 must be protected). Control, fixed, and mobile stations shall keep a minimum distance of 96.5 kilometers (60 miles) from all adjacent channel TV/DTV stations. Since mobiles and portables are able to move and communicate with each other, licensees must determine the areas where the mobiles can and cannot roam in order to protect the TV/DTV stations.

\* \* \* \* \*

16. Add subpart H to part 27 to read as follows:

## Subpart H—Competitive Bidding Procedures for the 698–746 MHz Band

Sec.

27.701 698–746 MHz band subject to competitive bidding.

27.702 Designated entities.

### § 27.701 698–746 MHz band subject to competitive bidding.

Mutually exclusive initial applications for licenses in the 698–746 MHz band are subject to competitive bidding procedures. The procedures set forth in part 1, subpart Q, of this chapter will apply unless otherwise provided in this part.

### § 27.702 Designated entities.

(a) *Eligibility for small business provisions.* (1) An entrepreneur is an entity that, together with its controlling interests and affiliates, has average gross revenues not exceeding \$3 million for the preceding three years. This definition applies only with respect to licenses in Block C (710–716 MHz and 740–746 MHz) as specified in § 27.5(c)(1).

(2) A very small business is an entity that, together with its controlling interests and affiliates, has average gross revenues not exceeding \$15 million for the preceding three years.

(3) A small business is an entity that, together with its controlling interests and affiliates, has average gross revenues not exceeding \$40 million for the preceding three years.

(4) A consortium of entrepreneurs, a consortium of very small businesses, or a consortium of small businesses is a conglomerate organization formed as a joint venture between or among mutually independent business firms, each of which individually satisfies the applicable definition in paragraphs (a)(1), (a)(2) or (a)(3) of this section. Where an applicant or licensee is a consortium of entrepreneurs, a consortium of very small businesses, or a consortium of small businesses, the gross revenues of each entrepreneur, very small business, or small business shall not be aggregated.

(b) *Bidding credits.* A winning bidder that qualifies as an entrepreneur or a consortium of entrepreneurs as defined in this section may use the bidding credit specified in § 1.2110(f)(2)(i) of this chapter. A winning bidder that qualifies as a very small business or a consortium of very small businesses as defined in this section may use the bidding credit specified in § 1.2110(f)(2)(ii) of this chapter. A winning bidder that qualifies as a small business or a consortium of small businesses as defined in this section may use the bidding credit specified in § 1.2110(f)(2)(iii) of this chapter.

## PART 73—RADIO BROADCAST SERVICES

17. The authority citation for part 73 continues to read as follows:

**Authority:** 47 U.S.C. 154, 303, 334 and 336.

18. Section 73.622 is amended by revising paragraph (a)(2) to read as follows:

### § 73.622 Digital television table of allotments.

(a) \* \* \*

(2) Petitions requesting a change in the channel of an initial allotment must specify a channel in the range of channels 2–58.

\* \* \* \* \*

3. Section 73.3572 is amended by revising the last sentence of paragraph (a)(4)(ii) to read as follows:

### § 73.3572 Processing of TV broadcast, Class A TV broadcast, low power TV, TV translator and TV booster station applications.

(a) \* \* \*

(4) \* \* \*

(ii) \* \* \* Where such an application is mutually exclusive with applications for new low power TV, TV translator or TV booster stations, or with other nondisplacement relief applications for facilities modifications of Class A TV, low power TV, TV translator or TV booster stations, priority will be afforded to the displacement application(s) to the exclusion of other applications, provided the permittee or licensee had tendered its initial application for a new LPTV or TV translator station to operate on channels 52–69 prior to the August 2000 filing window.

\* \* \* \* \*

[FR Doc. 02–2866 Filed 2–5–02; 8:45 am]

**BILLING CODE 6712–01–P**

## DEPARTMENT OF TRANSPORTATION

### Surface Transportation Board

#### 49 CFR 1104

[STB Ex Parte 576]

#### Electronic Access to Case Filings

**AGENCY:** Surface Transportation Board.

**ACTION:** Final rule.

**SUMMARY:** The Surface Transportation Board (Board) is amending its rules governing how documents are filed in agency proceedings to facilitate the scanning of those documents for publication on the Board's Internet website, [www.stb.dot.gov](http://www.stb.dot.gov). The Board also is amending its rules governing electronic submissions to comport with

current technology and is amending one rule to update a citation.

**EFFECTIVE DATE:** The amended rules are effective March 8, 2002.

**FOR FURTHER INFORMATION CONTACT:** Anne K. Quinlan (202) 565–1727. [TDD for the hearing impaired: 1–800–877–7339.]

**SUPPLEMENTARY INFORMATION:** For several years, the Board has been making filings received in select agency proceedings available to the public by publishing them under the “Filings” link on the Board's Internet website, [www.stb.dot.gov](http://www.stb.dot.gov). We have used two methods to make filings available on the Internet.

Initially, we made filings available by downloading text files from diskettes, which were required to be filed along with the paper copies in certain cases to facilitate case processing. Public reaction to having filings available on the Internet was positive, and we were encouraged to make all filings available on our website. However, downloading text files was labor intensive, and some files could not be downloaded at all. Moreover, text files included only text that the filer had word processed; no signatures, stamps, or graphics could be made available on-line. A more complete solution was needed.

More recently, the Board acquired scanning resources. Instead of downloading text files, we began to scan filings received in select cases and publish images of the filings on our website. Scanning technology has given the Board the ability to place on the Internet a replica of every documentary filing, in its entirety, in every case. Thus, scanning will be used to provide the public with more complete Internet access to the documentary record in Board proceedings.

To ensure that the highest quality image is captured during the scanning process and to facilitate high-speed scanning, rule 1104.2 will be amended. Amended rule 1104.2 will provide that filings must be typed, double-spaced, on 8½ by 11-inch white paper, with dark type no smaller than 12 point. These standards will provide adequate contrast for scanning and photographic reproduction. To facilitate the scanning process, original documents must be unbound and without driver tabs<sup>1</sup> and

<sup>1</sup> However, copies of filings may contain divider tabs. And, as prescribed in *General Procedures for Presenting Evidence in Stand-Alone Cost Rate Cases*, STB Ex Parte No. 347 (Sub-No. 3) (STB