



NTIA National Spectrum Strategy Implementation Plan

June 2024



Pillar One: A Spectrum Pipeline to Ensure U.S. Leadership in Advanced and Emerging Technologies

Pillar Two: Collaborative Long-Term Planning to Support the Nation's Evolving Spectrum Needs

Pillar Three: Unprecedented Spectrum Access and Management through Technology Development

Pillar Four: Expanded Spectrum Expertise and Elevated National Awareness

NSS Pillars

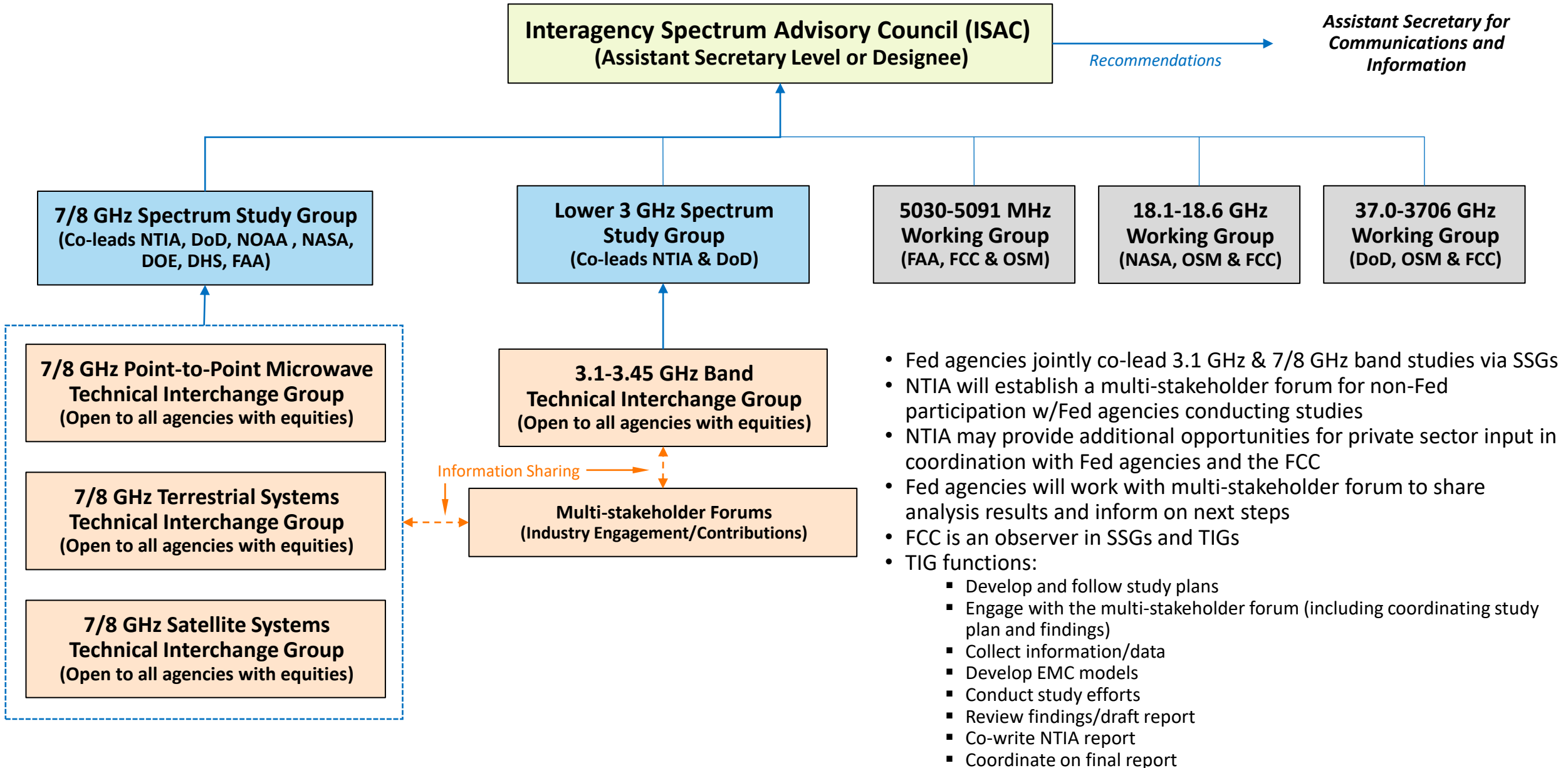
Outcome #	Outcome	Estimated Start	Estimated Completion	Responsible Agency	Contributing Stakeholder(s)
Strategic Objective 1.1 Ensure sufficient spectrum access to support Federal agency missions now and into the future					
1.1(a)	Documented agency requirements to secure sufficient spectrum access to support Federal agency missions	Sep 2024	Sep 2026	NTIA	Federal Agencies
1.1(b)	Establishment of an updated process for assessing Federal agency requirements for additional spectrum resources	Sep 2024	Sep 2026	NTIA	Federal Agencies
Strategic Objective 1.2 Ensure spectrum resources are available to support private sector innovation now and into the future					
1.2(a)	Adoption of study plans and schedules for completing in-depth studies	See Appendix	See Appendix	NTIA/ Affected Federal Agencies	Non-Federal Stakeholders, FCC
1.2(b)	Establishment of a project plan for study of each band and an integrated master schedule for tracking and oversight	Mar 2024	May 2024	NTIA	Federal Agencies
1.2(c)	Completion of band studies	ASAP upon funding, if applicable	See Appendix	NTIA/ Affected Federal Agencies	Non-Federal Stakeholders, FCC
1.2(d)	Identification of spectrum for repurposing based upon in-depth studies	TBD based on Studies	2 Months Later	NTIA	Federal Agencies, FCC, ISAC

Pillar One | A Spectrum Pipeline to Ensure U.S. Leadership in Advanced and Emerging Technologies

Outcome #	Outcome	Estimated Start	Estimated Completion	Responsible Agency	Contributing Stakeholder(s)
Strategic Objective 1.3 Maintain the spectrum pipeline by applying guiding principles and leading program management practices to identify additional bands for study					
1.3(a)	Determination of pertinent metrics and data elements for assessing spectrum utilization and creation of data specifications for collecting the data	Mar 2025	Mar 2026	NTIA/FCC	Federal Agencies, CSMAC
1.3(b)	Publication of spectrum management principles and best practice methods to guide the Federal Government in spectrum studies	Mar 2024	May 2025	NTIA	Federal Agencies, FCC
1.3(c)	Creation of program management function for managing spectrum reallocation activities	Mar 2024	Jun 2024	NTIA	Federal Agencies, FCC

Pillar One | A Spectrum Pipeline to Ensure U.S. Leadership in Advanced and Emerging Technologies

Pillar One Band Study Organizational Structure



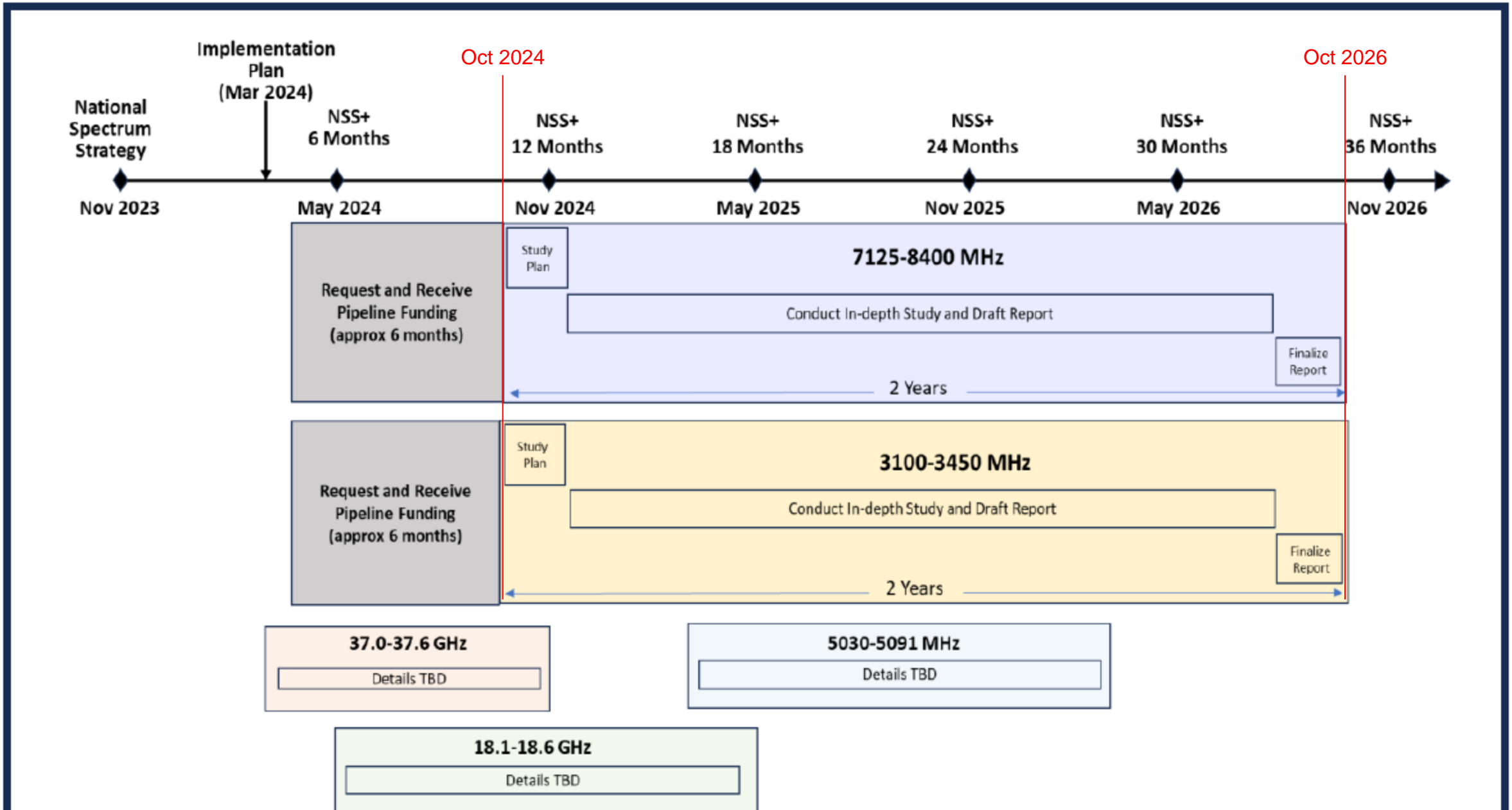
7/8 GHz (7.125-8.4 GHz): Schedule, Milestones, and Deliverables

MILESTONE/DELIVERABLE	DESCRIPTION	PRIMARY RESPONSIBILITY	COLLATERAL RESPONSIBILITY	TARGET DUE DATE
Establish Spectrum Study Group	NTIA, in coordination with co-leads, will stand up the group, including identifying participants, establishing work methods, and planning meetings. This group will function as an executive steering group and set objectives for the study to be executed within the TIG.	NTIA and Co-lead Agencies	ISAC	March 2024
Submit SRF Pipeline Plans for R&D and Planning Activities	Federal agencies seeking SRF Pipeline Act funding for research, engineering studies, and other expenses allowed pursuant to 47 U.S.C. § 923(g)(3)(A)(iii) will submit plans to the Tech Panel for approval.	Federal Agencies		May 2024
Initiate engagement with non-Federal stakeholders via the multi-stakeholder forum	Initiate actions for first meeting via multi-stakeholder forum to engage non-Federal stakeholders on plans for conducting the band study.	NTIA		June 2024
Approval of SRF Pipeline Plans for R&D and Planning Activities	The Tech Panel will review Pipeline Plans and approve/disapprove them.	Tech Panel		June 2024 or target 30 days from receipt of Plan
Initiate Technical Interchange Groups •Microwave point to point •Satellite (uplink and downlink) systems •Tactical/transportable communication/satellite (uplink and downlink) systems	Stand-up a working group to perform compatibility studies. It will function similarly to IRAC TSC and include agency SMEs and stakeholders willing to participate. It also will be a touch point for private sector engagement and contributions.	NTIA	Federal Agencies	October 2024, or following receipt of SRF whichever soonest
Finalize Study Plan	Draft and agree to a project plan, including task descriptions of scope of areas for technical study, goals, objectives, organization (including private sector engagement), project risks, and budget issues (if any).	NTIA	Federal Agencies	December 2024
Finalize Project Schedule	Draft and agree to a project schedule, including start and completion dates for key deliverables, sequencing of activities, and interdependencies.	NTIA	Federal Agencies	December 2024
Coordinate findings with non-Federal stakeholders via multi-stakeholder forum	Coordinate findings and iterate appropriate section of report with non-Federal stakeholders via multi-stakeholder forum	NTIA	Federal Agencies	July 2026
Complete In-Depth Study	Execute the in-depth study consistent with the agreed upon study plan and project schedule, including completion of deliverables (e.g., technical reports) and drafting of overall study report.	NTIA	Federal Agencies	August 2026
Final Report	Final report with findings and recommendations.	NTIA	ISAC	October 2026

3 GHz (3.1-3.45 GHz): Schedule, Milestones, and Deliverables

MILESTONE/DELIVERABLE	DESCRIPTION	PRIMARY RESPONSIBILITY	COLLATERAL RESPONSIBILITY	TARGET DUE DATE
Dynamic Spectrum Sharing(DSS)	Development of a DSS Demonstration	NTIA and DoD		September 2025
Establish Spectrum Study Group	NTIA and DoD will set up the Lower 3 GHz Spectrum Study Group (SSG), including identifying participants, establishing work methods, and planning meetings.	NTIA and DoD	ISAC	March 2024
Submit SRF Pipeline Plans for R&D and Planning Activities	Federal agencies seeking SRF Pipeline Act funding for research, engineering studies, and other expenses allowed pursuant to 47 U.S.C. § 923(g)(3)(A)(iii) will submit plans to the Technical Panel for approval.	Federal Agencies		May 2024
Initiate engagement with non-Federal stakeholders via the multi-stakeholder forum	Initiate actions for first meeting via multi-stakeholder forum to engage non-Federal stakeholders on plans for conducting the band study.	NTIA and DoD		June 2024
Approval of SRF Pipeline Plans for R&D and Planning Activities	The Technical Panel will review Pipeline Plans and approve/disapprove them.	Tech Panel		June 2024 or target 30 Days from receipt of Plan
Initiate Technical Interchange Group	Establish working groups by identifying participants, establishing work methods, and planning meetings and begin study.	NTIA and DoD	Federal Agencies	October 2024 or following receipt of SRF funding, whichever is soonest
Finalize Study Plan	Draft and agree to a plan, including task descriptions of scope of areas for technical study, goals, objectives, organization (including private sector engagement), project risks, and budget issues (if any).	NTIA and DoD	Federal Agencies	December 2024
Finalize Project Schedule	Draft and agree to a project schedule, including start and completion dates for key deliverables, sequencing of activities, and interdependencies.	NTIA and DoD	Federal Agencies	December 2024
Input from Dynamic Spectrum Sharing (DSS) Initiative	After receiving input based on completion of DSS initiative by DoD, consider how the DSS effort can augment the sharing studies.	NTIA and DoD	Federal Agencies	October 2025
Coordinate findings with non-Federal stakeholders via multi-stakeholder forum	Coordinate findings and iterate appropriate section of report with non-Federal stakeholders via multi-stakeholder forum.	NTIA and DoD	Federal Agencies	July 2026
Complete In-Depth Study	Execute the in-depth study consistent with the agreed upon study plan and project schedule, including completion of deliverables (e.g., technical reports) and drafting of overall study report.	NTIA and DoD	Federal Agencies	August 2026
Final Report	Final co-written report with findings and recommendations submitted to the ISAC.	NTIA and DoD	ISAC	October 2026

Timeline for Band Studies



Outcome #	Outcome	Estimated Start	Estimated Completion	Responsible Agency	Contributing Stakeholder(s)
Strategic Objective 2.1 Establish a persistent strategic spectrum planning process guided by the best available science and data					
2.1(a)	Establishment of improved collaboration framework	Mar 2024	Sep 2025	NTIA/FCC	Federal Agencies, ISAC, Tribes, Public
2.1(b)	Implementation of national long-term spectrum planning process	Sep 2024	Sep 2026	NTIA/FCC	EOP, Federal Agencies, ISAC, CSMAC , Public
Strategic Objective 2.2 Develop and document an evidence-based national spectrum decision-making methodology					
2.2(a)	A value-based model to inform spectrum policy decisions	Mar 2026	Mar 2027	NTIA/FCC	EOP, Federal Agencies, NSF, ISAC, CSMAC (Collaboration Framework)
2.2(b)	Historical assessment of reallocated/auctioned bands	Mar 2025	Mar 2026	NTIA/FCC	Federal Agencies, Public
Strategic Objective 2.3 Define requirements and implement capabilities to capture essential data and information on spectrum use					
2.3(a)	A defined, agreed-to methodology for representing current spectrum use and future requirements	Mar 2025	Mar 2026	NTIA/FCC	Federal Agencies, CSMAC, Public
2.3(b)	Documented requirements for new capabilities needed to process improved data, including information technology and modeling tools	Nov 2026	Nov 2027	NTIA/FCC	Federal Agencies
2.3(c)	Establishment of national best practices for performing unbiased technical, scientific, mission, and economic analyses	Mar 2026	Mar 2028	NTIA/FCC	Federal Agencies, CSMAC (Collaboration Framework)

NTIA will outline a new collaboration framework using CSMAC as appropriate

Pillar Two | Collaborative Long-Term Planning to Support the Nation's Evolving Spectrum Needs

Outcome #	Outcome	Estimated Start	Estimated Completion	Responsible Agency	Contributing Stakeholder(s)
Strategic Objective 3.1 Improve spectrum efficiency and bolster coexistence by facilitating investments in new and emerging technologies					
3.1(a)	A process to identify enabling technologies for spectrum-dependent systems to enhance spectrum efficiency and foster coexistence	Oct 2025	Apr 2026	NTIA/FCC	Federal Agencies, CSMAC (Collaboration Framework)
3.1(b)	Published, recommended key motivating factors for driving Federal and non-Federal investment in spectrum innovation	Mar 2026	Sep 2026	NTIA/FCC	Federal Agencies, CSMAC (Collaboration Framework)
3.1(c)	A roadmap for improving receiver resistance to harmful interference	Oct 2025	Jul 2026	NTIA/FCC	Federal Agencies, CSMAC (Collaboration Framework)
3.1(d)	Recommendations for potential investment based on assessment of smart spectrum management technologies	Mar 2026	Sep 2026	NTIA/FCC	Federal Agencies, CSMAC (Collaboration Framework)
3.1(e)	Designation of a global standards for advanced spectrum sharing and technologies team	Sep 2025	Dec 2025	NTIA/FCC	CSMAC (Collaboration Framework), NIST
3.1(f)	Recommendations for a common platform for shared spectrum access	Sep 2024	Mar 2025	NTIA	Federal Agencies, CSMAC, FCC

Pillar Three | Unprecedented Spectrum Access and Management through Technology Development

Outcome #	Outcome	Estimated Start	Estimated Completion	Responsible Agency	Contributing Stakeholder(s)
Strategic Objective 3.2 Commit to improving collective understanding of the electromagnetic spectrum through coordinated, focused, and sophisticated research and development (R&D)					
3.2(a)	Development and publication of a National Spectrum R&D Plan	Mar 2024	Sep 2024	OSTP	NTIA, NSF, FCC, ISAC, Federal Agencies, Public
3.2(b)	Revision of the National Spectrum R&D Plan	Mar 2025	Mar 2026	OSTP	NTIA, NSF, FCC, ISAC, Federal Agencies, Public
3.2(c)	Process for a national (government, industry, and academia) assessment and certification of spectrum R&D infrastructure and tools	Mar 2026	Sep 2026	NTIA	CSMAC (Collaboration Framework), NIST, Federal Agencies, FCC
3.2(d)	Data collection and spectrum utilization program	Oct 2025	Oct 2026	NTIA/FCC	Federal Agencies, CSMAC (Collaboration Framework)
3.2(e)	Spectrum Sandbox Program	Dec 2025	June 2026	NTIA	CSMAC (Collaboration Framework), FCC, NASCTN, Federal Agencies
3.2(f)	Advanced Dynamic Spectrum Sharing demonstration and report	Mar 2024	Sep 2025	DoD/NTIA	FCC, NIST, Federal Agencies
3.2(g)	National DSS Testbed	Mar 2024	Sep 2025	NTIA	NSF, DoD, FCC, Federal Agencies

Pillar Three | Unprecedented Spectrum Access and Management through Technology Development

Outcome #	Outcome	Estimated Start	Estimated Completion	Responsible Agency	Contributing Stakeholder(s)
Strategic Objective 3.3 Pursue spectrum policies that maximize flexible use of spectrum, accommodate new and innovative technologies, and identify opportunities to expand spectrum access					
3.3(a)	Policy initiatives to maximize regulatory flexibility to promote U.S. technological innovation and opportunistic sharing	Oct 2025	Apr 2026	NTIA/FCC	CSMAC (Collaboration Framework), Federal Agencies
3.3(b)	Spectrum Relocation Fund recommendations for improved coexistence and compatibility	Sep 2024	Mar 2025	NTIA/OMB	Federal Agencies, FCC

Pillar Three | Unprecedented Spectrum Access and Management through Technology Development

Outcome #	Outcome	Estimated Start	Estimated Completion	Responsible Agency	Contributing Stakeholder(s)
Strategic Objective 4.1 Attract, train, and grow the current and next-generation spectrum workforce					
4.1(a)	A National Spectrum Workforce Plan	Jun 2024	Dec 2025	NSF/NTIA	EOP, FCC, CSMAC, Federal Agencies
4.1(b)	Agency spectrum workforce programs	Mar 2024	Mar 2025	Federal Agencies	NTIA, NSF, FCC, academic institutions, professional societies
Strategic Objective 4.2 Improve policymakers' understanding of spectrum considerations					
4.2(a)	Senior-level spectrum training and awareness materials repository	Sep 2024	Sep 2025	NTIA/FCC	Federal Agencies
4.2(b)	"Spectrum 101" training program for leaders at all levels of government	Mar 2025	Mar 2026	NTIA/FCC	Federal Agencies
Strategic Objective 4.3 Improve the public's understanding of electromagnetic spectrum and raise awareness of its role in everyday life					
4.3(a)	A public spectrum "literacy" program	Mar 2026	Mar 2027	Federal Agencies	NTIA, FCC, NSF

Pillar Four | Expanded Spectrum Expertise and Elevated National Awareness

Thanks

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- Strategic Objective 1.1 | Ensure sufficient spectrum access to support Federal agency missions now and into the future
 - Outcome 1.1(a): Documented agency requirements to secure sufficient spectrum access to support Federal agency missions
 - Outcome 1.1(b): Establishment of an updated process for assessing Federal agency requirements for additional spectrum resources
- Strategic Objective 1.2 | Ensure spectrum resources are available to support private sector innovation now and into the future
 - Outcome 1.2(a): Adoption of study plans and schedules for completing in-depth studies
 - Outcome 1.2(b): Establishment of a project plan for study of each band and an integrated master schedule for tracking and oversight
 - Outcome 1.2(c): Completion of band studies
 - Outcome 1.2(d): Identification of spectrum for repurposing based upon in-depth studies
- Strategic Objective 1.3 | Maintain the spectrum pipeline by applying guiding principles and leading program management practices to identify additional bands for study
 - Outcome 1.3(a): Determination of pertinent metrics and data elements for assessing spectrum utilization and creation of data specifications for collecting the data
 - Outcome 1.3(b): Publication of spectrum management principles and best practice methods to guide the Federal Government in spectrum studies
 - Outcome 1.3(c): Creation of a program management function for managing spectrum reallocation activities

Pillar One | A Spectrum Pipeline to Ensure U.S. Leadership in Advanced and Emerging Technologies

- Strategic Objective 2.1 | Establish a persistent strategic spectrum planning process guided by the best available science and data
 - Outcome 2.1(a): Establishment of an improved collaboration framework
 - Outcome 2.1(b): Implementation of a national long-term spectrum planning process
- Strategic Objective 2.2 | Develop and document an evidence-based national spectrum decision-making methodology
 - Outcome 2.2(a): A value-based model to inform spectrum policy decisions
 - Outcome 2.2(b): Historical assessment of reallocated/auctioned bands
- Strategic Objective 2.3 | Define requirements and implement capabilities to capture essential data and information on spectrum use
 - Outcome 2.3(a): A defined, agreed-to methodology for representing current spectrum use and future requirements
 - Outcome 2.3(b): Documented requirements for new capabilities needed to process improved data, including information technology and modeling tools
 - Outcome 2.3(c): Establishment of national best practices for performing unbiased technical, scientific, mission, and economic analyses

Pillar Two | Collaborative Long-Term Planning to Support the Nation's Evolving Spectrum Needs

- **Strategic Objective 3.1 | Improve spectrum efficiency and bolster coexistence by facilitating investments in new and emerging technologies**
 - Outcome 3.1(a): A process to identify enabling technologies for spectrum-dependent systems to enhance spectrum efficiency and foster coexistence
 - Outcome 3.1(b): Published, recommended, key motivating factors for driving Federal and non-Federal investment in spectrum innovation
 - Outcome 3.1(c): A roadmap for improving receiver resistance to harmful interference
 - Outcome 3.1(d): Recommendations for potential investment based on assessment of smart spectrum management technologies
 - Outcome 3.1(e): Designation of a global standards for advanced spectrum sharing and technologies team
 - Outcome 3.1 (f): Recommendations for a common platform for shared spectrum access
- **Strategic Objective 3.2 | Commit to improving collective understanding of the electromagnetic spectrum through coordinated, focused, and sophisticated research and development (R&D)**
 - Outcome 3.2(a): Development and publication of a National Spectrum R&D Plan
 - Outcome 3.2(b): Revision of the National Spectrum R&D Plan
 - Outcome 3.2(c): Process for a national (including government, industry, and academia) assessment and certification of spectrum R&D infrastructure and tools
 - Outcome 3.2(d): Data collection and spectrum utilization program
 - Outcome 3.2(e): Spectrum Sandbox Program
 - Outcome 3.2(f): Advanced dynamic spectrum sharing demonstration and report
 - Outcome 3.2(g): National DSS Testbed
- **Strategic Objective 3.3 | Pursue spectrum policies that maximize flexible use of spectrum, accommodate new and innovative technologies, and identify opportunities to expand spectrum access**
 - Outcome 3.3(a): Policy initiatives to maximize regulatory flexibility to promote U.S. technological innovation and opportunistic sharing
 - Outcome 3.3(b): Spectrum Relocation Fund recommendations for improved coexistence and compatibility

Pillar Three | Unprecedented Spectrum Access and Management through Technology Development

- Strategic Objective 4.1 | Attract, train, and grow the current and next-generation spectrum workforce
 - Outcome 4.1(a): A National Spectrum Workforce Plan
 - Outcome 4.1(b): Agency spectrum workforce programs
- Strategic Objective 4.2 | Improve policymakers' understanding of spectrum considerations
 - Outcome 4.2(a): Senior-level spectrum training and awareness materials repository
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 - Outcome 4.2(a): Senior-level spectrum training and awareness materials repository
 - Outcome 4.2(b): "Spectrum 101" training program for leaders at all levels of government
- Strategic Objective 4.3 | Improve the public's understanding of electromagnetic spectrum and raise awareness of its role in everyday life
 - Outcome 4.3(a): A public spectrum "literacy" program

Pillar Four | Expanded Spectrum Expertise and Elevated National Awareness