

SPACE AGENDA 2021



**SURVEY OF SPACE-RELATED
POLITICAL APPOINTEES AND OFFICES IN
THE U.S. GOVERNMENT**

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This chapter discusses the connection between political appointees and policymaking for space by exploring the universe of appointees that make space-related decisions and support both development and implementation of the president’s policy on space issues. The departmental space offices, space policy advisory group in the White House, space-focused political appointees, and appointees with influence over space alongside a larger portfolio all contribute to the context and content of space policy, and are analyzed here. This analysis explores key factors for consideration and choices made by past administrations in order to demonstrate the breadth of options facing the new administration and potential consequences following each choice.

Introduction

Before any new administration can implement its space policy and strategy, it must select who will be responsible for developing and implementing it. The wide range of commercial, civil, and military applications of space technology have led to the development of stakeholders and offices relating to space in many different departments and agencies across the U.S. government. The political appointments that touch upon space within these agencies are diverse and widely distributed.

This chapter discusses the connection between political appointees and policymaking for space. It starts with a survey of the offices and organizations that have direct space responsibilities. The next section uses four dimensions to discuss the makeup of advisory groups that inform space policy decisions and shape the narrative that goes to the president, and also provides an overview and short evaluation of past administration choices regarding formulation of national space policy. This is followed by a more focused survey of the political appointments that include a significant space portfolio. These include Senate-confirmed appointees, other presidential appointees, and other senior official positions. The final section is an overview of political appointments that have *influence* over space policy and strategy, albeit indirect, but which are important in setting the context for future U.S. space policy and strategy.

Background on Political Appointees

Currently, a new presidential administration has roughly 4,000 political appointments to fill, with almost one quarter of those requiring Senate confirmation.¹ The number of appointees can increase (or decrease) with each new presidential

administration. Growth or decline in federal appointees can be seen as both a general trend in federal bureaucracy and as part of the efforts of individual administrations to broaden and deepen policy influence, two related dynamics with both common and independent effects. The time required to fill positions has tended to grow in certain circumstances, particularly in periods of *divided* government. Among the factors affecting this are long and often grueling vetting processes, polarization in confirmation hearings, and “holding hostage” confirmations in exchange for concessions on unrelated policy issues. However, presidents have other means of administrative influence, such as control over hiring authorities, the use of Senior Executive Service allocations, recess appointments,² or even informal White House “czars” to direct policy actions.

What’s more, it can be difficult to analyze trends in political appointments due to challenges in data collection. In March 2019, the Government Accountability Office (GAO) reported: “There is no single source of publicly available, comprehensive, and timely data on appointees.”³ The commonly used Plum Book has been criticized as being unreliable, cumbersome, lacking transparency, and immediately outdated the moment it is published. The PLUM Act of 2020, introduced and stalled in Congress, would require the establishment and maintenance of an online public directory of appointees that is “searchable, sortable, downloadable[,]” and updated more frequently than the current four-year interval.⁴ And the 2020 Plum Book was not published on schedule, reducing transparency on available appointed positions.

Offices and Organizations with Space Policy Responsibilities

Because space is critical to so many national interests, responsibilities for space are found throughout the U.S. government. Although the majority of government spending on space programs goes through the National Aeronautics and Space Administration (NASA), the Department of Defense (DOD), and the intelligence community, space-related offices can also be found within the Departments of Commerce, State, Energy, and Transportation. Other entities such as the Office of Management and Budget (OMB), which manages resources and communications between the executive branch and Congress, include space in their government-wide portfolios and can have significant influence on space budgets and programmatic activities.

Table 1: Space Offices Across Current Executive Branch Departments and Agencies⁵

Agency/Department	Space Stakeholder(s)
Department of Defense	Space Force; U.S. Space Command (USSPACECOM); Office of the Secretary of Defense (OSD); other DOD components
Executive Office of the President	OMB; Office of Science and Technology Policy (OSTP); National Security Council (NSC); National Space Council (NSpC)
Intelligence Community	Office of the Director of National Intelligence (ODNI) and associated intelligence agencies
Department of Commerce	National Oceanic and Atmospheric Administration (NOAA), including National Environmental Satellite, Data and Information Service (NESDIS) and the Office of Space Commerce (OSC)
Department of Energy	Lawrence Livermore, Los Alamos, and Sandia National Laboratories
Department of State	Office of Emerging Security Challenges, Bureau of Arms Control, Verification, and Compliance (AVC); Office of Space Affairs, Bureau of Oceans and International Environment and Scientific Affairs
Department of Transportation	Federal Aviation Administration (FAA)
National Aeronautics and Space Administration	All of NASA except for the Aeronautics Research Mission Directorate

Within DOD alone a 2016 report by GAO identified approximately 60 stakeholder organizations involved in some way in space acquisition, management, or oversight.⁶ In recent years, the Trump administration has made several changes to DOD organization, including the re-establishment of U.S. Space Command (USSPACECOM) as a combatant command dedicated to space and the creation of the U.S. Space Force, a new military branch to organize, train, and equip for space.

There have also been recent debates about how the U.S. government should organize its civil and commercial space efforts. Space has long been bifurcated within the Department of State, with civil and commercial space being handled in the Office of Space and Advanced Technology in the Bureau of Oceans and International Environmental and Scientific Affairs, while space security issues are typically addressed by the Bureau of Arms Control, Verification, and Compliance (AVC). There have been recent discussions on how to change the organization and funding for non-military space traffic management within the Department of Commerce, leading to reports and legislative proposals to house those activities in an expanded Office of Space Commerce (OSC) and elevated to the "Bureau of Space Commerce".⁷ However, in December 2020 this proposal was not included when Congress passed the Consolidated Appropriations Act of 2021. Instead OSC will merge with the Office of Commercial Remote Sensing Regulatory Affairs, still under the National Oceanic and Atmospheric Administration's (NOAA) National Environmental Satellite, Data and Information Service (NESDIS), and collaborate with other entities to initiate a space traffic management pilot program using less money than requested but more than provided historically.⁸

Recent years have witnessed significant changes in the organization of space activities across the U.S. government, and decisions are fast approaching regarding further changes in civil, commercial, and military space in the next year. One area in which the new administration may need to make early decisions is in how the White House and the Executive Office of President (EOP) will organize policy formulation pertaining to space and monitor its implementation.

Options for a Space Advisory Group in the White House

Since the dawn of the Space Age, each administration has taken a different approach to coordinating national space policy across the many departments and agencies. There are four key elements to any system of organizing space policy within the White House and a wide range of possible choices and combinations among them. The four dimensions are organizational location, membership, staffing, and connection to the president. The following section describes each dimension, how it has varied in previous administrations, and some of the strengths and weaknesses of different options to address the dimensions. The decisions of the last five administrations are summarized in Table 2.

Organizational Location. The Trump administration opted to reestablish the National Space Council (NSpC), which last existed under the George H.W. Bush administration. This represents the option of a standalone council within the Executive Office of the President. Other administrations chose either to locate the group within the National Security Council (NSC) or to not establish a formal advisory group at all. The decision on where and how to organize a space advisory group within EOP greatly affects its policy scope and capabilities for interagency coordination and policy development. The NSC space committees tend to focus primarily on national security space issues, requiring further coordination, typically with OSTP, on civil and commercial space topics. An independent group like the National Space Council benefits from being a single point of coordination for all space stakeholders across the U.S. government, but has often been opposed by NASA and DOD, the two biggest space stakeholders, because some senior leaders have viewed it "as a barrier between themselves and the president that will do little more than slow things down."⁹ This challenge of balancing efficiency with interagency coordination features many potential areas for tradeoffs that each administration has to navigate.

Table 2: Space Advisory Groups of the Last Five Administrations¹⁰

Administration	Name	Organization	Members	Staff	Link to POTUS
George H.W. Bush	National Space Council (NSpC)	Independent in EOP	Agency heads	Mostly temp assignment from other agencies	VP Chair
Bill Clinton	No formal space advisory group	Science advisor's office (OSTP), National Science & Technology Council (NSTC)	Agency heads (NSTC)	Small space issues contingent	NSTC chaired by President; typically delegated to VP
George W. Bush	Space Policy Coordinating Committee (PCC)	National Security Council (NSC)	Assistant Secretary level from stakeholder agencies	Director for Space Policy on NSC staff	Must pass through NSC deputies' and principals' committees
Barack Obama	PCC process	NSC (coordinate with OSTP)	Assistant Secretary level from stakeholder agencies	Director for Space Policy on NSC staff	Pass through NSC committees
Donald Trump	NSpC	Independent in EOP	Agency heads	Dedicated staff plus detailees	VP Chair

Membership. An expanding space enterprise drives growth in the number of stakeholder organizations seeking representation on a space advisory group. The level of leadership participation can affect the group’s efficiency and productivity. Past space advisors, such as in the Clinton administration, only featured a small number of mid-level experts instead of senior officials, while both iterations of NSpC featured the Cabinet-level leadership of all the agencies involved in space. Some of the NSC-based advisory committees featured mid-level representatives from each organization, which has the benefit of allowing more frequent participation, but the downside of requiring multiple levels of review and approval by more senior-level officials. As the section on space organizations across the U.S. government indicates, there are many options for which agencies or offices to include, and those decisions will affect which kinds of policies receive the most attention. The George H.W. Bush administration’s NSpC included the Secretaries of State, Treasury, Defense, Commerce, and Transportation as well as the White House Chief of Staff, Science Advisor, and the leadership of OMB, NSC, CIA, and NASA. The Trump administration NSpC did not include Treasury but added Energy, Homeland Security, the Director of National Intelligence, the National Security Agency, economic policy advisor, domestic policy advisor, and the Chairman of the Joint Chiefs of Staff.

Staff. Staffers’ affiliations—the number of people appointed by the EOP versus detailed from stakeholder agencies—can affect priority setting and group interactions. Many past administrations have not developed a large cadre of space policy staff within the EOP. In cases such as the George H.W. Bush NSpC, most of the staff were on temporary assignment from the various agencies participating in the council. The working groups in the NSC space committees under the George W. Bush and Barack Obama administrations were made up of representatives from the agencies, led by an NSC staff member with the title Director for Space. More recently, during the three and a half years of Donald Trump’s NSpC, there were typically eight or nine staffers, including five or six appointees and three detailees (one each from DOD, NASA, and the State Department).

Leadership and Links to the President. The president’s level of interest will affect the degree to which space issues rise in the crowded agenda, as will the multi-layered process used to get the issues to the top decisionmaker. This dimension has been particularly varied over time based on the priority the president afforded to space relative to other policy issues and the president’s relationship with the advisors. Both iterations of NSpC were chaired by the vice president,

a very direct link. The NSC space committees had to get products and decisions passed through the Deputies Committee and Principals Committee before reaching the National Security Advisor, who would then report to the president. There are many other options for leadership and oversight of the committee, such as a more agency-centric approach with co-leadership by the NASA administrator and Secretary of the Air Force or Chief of Space Operations, for example. A direct link to the president may be helpful in getting attention and action on key space priorities, but there are also benefits to having officials with specialized space expertise and tighter connection to the implementing agencies to guide the group's agenda and discussions.

Political Appointees Focused on Space Across the U.S. Government

Political appointees involved in the space enterprise are also widely distributed across the U.S. government. A survey of political appointees across all of these organizations can help to demonstrate the breadth and depth of space policy issues while highlighting a number of key positions that will need to be filled by any administration wishing to be active in space policy.¹¹ Besides notable exceptions such as NASA and the Space Force, space is not the primary mission of most agencies and departments that cover space issues. Therefore, officials with space as the majority of their portfolio often do not sit at the top levels of political appointments.

The organizations that do have one or more presidentially nominated space appointees include the Department of Defense, the Department of the Air Force, and NASA. Of the long-standing political appointee positions with space as the majority or entirety of their portfolio, NASA is home to three positions requiring Senate confirmation: Administrator, Deputy Administrator, and Chief Financial Officer.

The Departments of Commerce and Defense also have numerous positions below the level of presidential appointment that can be filled by career or noncareer appointees. At the Department of Commerce, NOAA features leadership positions principally or heavily oriented to space such as the administrators of NESDIS, the Office of Satellite and Product Operations, and the assistant administrators for Weather Services and for Oceanic and Atmospheric Research, although some of these positions include significant non-space responsibilities as well. Within DOD, positions such as the Under Secretaries of Defense for Comptroller and Policy, and the Directors of Operational Test and Evaluation and Cost Assessment and Program Evaluation have all included appointees with an emphasis or specialty in space. The titles and responsibilities of these positions, or the offices in which they are posted, can vary significantly from one administration to another.

Several changes during the Trump administration have led to the creation of new space appointee positions. As mentioned above, the reinstated NSpC, with a non-Senate-confirmed appointee in the position of Executive Secretary, includes a staff and a mission fully dedicated to national space policy issues, supporting a council of Cabinet-level officials.¹² The establishment of the U.S. Space Force also contributed to the recent rearrangement of space appointees within the Department of the Air Force and DOD, primarily the creation of the positions of Assistant Secretary of the Air Force for Space Acquisition and Integration, the Assistant Secretary of Defense for Space Policy, and the director of the new Space Development Agency.¹³ The Trump administration also elevated two existing space-focused leadership positions within the intelligence community to a level of political appointee requiring Senate confirmation.

Political Appointees with Influence over Space Policy

Although most political appointee positions with a primary focus on space do not currently need Senate confirmation, there are a number of high-level political appointee positions that include space as part of a larger portfolio and therefore can be highly influential in space policy despite not focusing solely on space topics. Some of these officials come from a space background themselves.

Examples of space-influential appointees can be found in all departments and organizations that feature space. Within DOD, influential appointees include the Secretary of Defense, Secretary of the Air Force, and Under Secretaries of Defense such as those for Acquisition and Sustainment; Research and Engineering; Comptroller and Chief Financial Officer; Intelligence and Security; and Policy. Since military space systems and personnel are part of DOD processes (such as acquisitions and budgeting) and play a role in activities such as intelligence and defense policy, all of the top officials for those processes and activities will have some nexus to space.

In the Department of Commerce, the NOAA administrator oversees a number of space-specific offices and activities and the current debates on authorities over space traffic management could lead to the creation of a higher-level appointee to oversee space commerce (currently under NOAA but some legislative proposals have suggested elevating it to a bureau).¹⁴ The Department of State positions that include space policy are the Assistant Secretary for International Security and Nonproliferation, focusing on national security space, and the Assistant Secretary of the Bureau of Oceans and International Environmental and Scientific Affairs, whose portfolio includes more commercial and civil space issues.¹⁵ In the Department of Energy, the Undersecretary for Nuclear Security/Administrator of the National Nuclear Security Administration has some connection to space policy through nuclear policy. In the Department of Transportation, the Assistant Secretary for Research and Technology oversees several space-related offices, such as the National Executive Committee for Space-Based Positioning, Navigation, and Timing, and the Administrator of the Federal Aviation Administration oversees elements of airspace and communications as well as the regulatory mechanism for commercial space launch and reentry.

The broad nature of many of these positions means that the influence an appointee has on space policy can be closely related to the personal background, preferences, and experience of the individual filling the position. Some appointees may be more inclined to focus on topics or areas in which they have experience, so an official with a more extensive space background may elevate the space activities within the larger portfolio of the organization. For example, although the position of Under Secretary of Defense for Research and Engineering covers activities across all services and domains, an appointee in that position with previous experience in government and industry space-focused roles pursued a number of space initiatives, including the development of a new organization: The Space Development Agency.¹⁶

This indicates that, in addition to the direct space policies and directives promulgated by an administration and through the departments, priorities and organizations can be influenced by the selection of a political appointee with a background particularly suited for a specific topic or task. When it comes to coordinating space policy across the U.S. government, the *who* of decisionmaking can be just as important as the *what*.

Although not every space-inclusive position could (or even should) be filled by an appointee with space expertise, it is important to recognize where these positions are. The overall effectiveness of appointees in achieving the administration's space policy goals can be bolstered by techniques such as selecting subordinates to the space-inclusive appointee with strong expertise in the space elements of the portfolio and by highlighting to the appointee the ways in which their job will impact space and vice versa.

Conclusion

Some of the most difficult and significant decisions in U.S. space policy will be made long before any text is written or any directive is signed. The new administration will benefit from a strategic approach to identifying the organizations critical to space policy, establishing the forums for policy coordination and advice to the White House, and selecting the individuals responsible for developing and implementing space policy across the federal government. This chapter provided some insight into the wide range of possibilities to choose from as well as some background into what choices have been made in the past. Decisions made in the early weeks and months of any administration can shape the U.S. approach to space for years or decades to come.

Appendix

“Every four years, just after the Presidential election, the United States Government Policy and Supporting Positions, commonly known as the Plum Book, is published, alternately, by the Senate and the House. The Plum Book is used to identify presidentially appointed positions within the Federal Government.”* **The December 2020 edition has information current as of June 30, 2020.** It is important to identify those positions that existed at that time for comparison of what the next administration is starting with. Nonetheless, **some of these positions have since been filled, vacated, added, or eliminated.**

The publication contains several types of letter codes that identify the type of appointment and are used for space positions discussed in the accompanying chapter. They are as follows:

PAS = Positions Subject to Presidential Appointment with Senate Confirmation

PA = Positions Subject to Presidential Appointment without Senate Confirmation

CA = Positions Designated as SES “General”

NA = SES General Positions Filled by Noncareer Appointment

TA = SES Positions Filled by Limited Emergency or Limited Term Appt

SC = Positions Filled by Schedule C Excepted Appointment

XS = Positions Subject to Statutory Excepted Appointment

See the graphic below for a look at space positions as of June 30, 2020.

*“United States Government and Supporting Positions (Plum Book),” Government Publishing Office (GPO), January 2021 (<https://www.govinfo.gov/collection/plum-book?path=/GPO/United%20States%20Government%20Policy%20and%20Supporting%20Positions%20%2528Plum%20Book%2529>).

Agency/Department	Office/Subunit	Title	Type of Appointment
Executive Office of the President	National Space Council	Deputy Assistant to the President and Executive Secretary of the National Space Council	PA
Executive Office of the President	National Space Council	Senior Advisor for Space Policy	XS
Executive Office of the President	National Space Council	Chief of Staff for the National Space Council	XS
Executive Office of the President	National Space Council	Special Assistant to the Executive Secretary of the National Space Council	XS
Department of Commerce	Technology Administration	Director Office Air and Space Commercialization and Special Assistant to the Under Secretary	N/A
Department of Commerce	Office of Air and Space Commercialization	Director, Office of Space Commerce	NA
Department of Commerce	Office of Satellite and Product Operations	Director, Office of Satellite and Product Operations	CA
Department of Commerce	Office of Administrator Satellite, Data Information Service	Assistant Administrator for National Environmental Satellite Data and Information Services	CA
Department of Commerce	Office of Administrator Satellite, Data Information Service	Deputy Assistant Administrator, National Environmental Satellite Data and Information Services	CA
Department of the Air Force	Deputy Under Secretary (SPACE)	Director, Principal DOD Space Advisor Staff	SC
Department of the Army	Office Assistant Secretary Army (Acquisition, Logistics and Technology)	Deputy Director, Hypersonic, Directed Energy, Space & Rapid Acquisition Office	TA
Department of Defense	Office of the Secretary of Defense	Director, National Reconnaissance Office	PAS
Department of Defense	Office of the Secretary of Defense	Inspector General of the NRO	PAS
Department of Defense	Office of the Under Secretary of Defense (Research and Engineering)	Chief Space Transport Cell	SC
Department of Defense	Office of the Under Secretary of Defense (Research and Engineering)	Director, Space Development Agency	TA
Department of Defense	Office of the Under Secretary of Defense (Research and Engineering)	Deputy Director Space Development Agency	NA
Department of Defense	Office of the Assistant Secretary of Defense (Homeland Defense and Global Security)	Deputy Assistant Secretary of Defense for Space Policy	NA
Department of Defense	Office of the Assistant Secretary of Defense (Homeland Defense and Global Security)	Principal Director, Space Policy	CA
Department of Defense	Office of the Under Secretary of Defense (Comptroller)	Associate Director for Air, Space, and Intelligence Programs	CA
Department of Justice	Office of the Associate Attorney General	Chief, Defense, Industrial, and Aerospace	CA

Agency/Department	Office/Subunit	Title	Type of Appointment
Department of Transportation	Office of Research, Development, and Technology	Director, National Space-Based Positioning, Navigation, and Timing Coordination Office	CA
NASA	Office of the Administrator	Administrator	PAS
NASA	Office of the Administrator	Deputy Administrator	PAS
NASA	Office of the Administrator	Chief of Staff	NA
NASA	Office of the Administrator	Deputy Chief of Staff	NA
NASA	Office of the Administrator	Senior Advisor, International and Legal Affairs	TA
NASA	Office of the Administrator	Special Assistant to the Administrator	SC
NASA	Office of the Administrator	Video Production Advisor	SC
NASA	Office of the Administrator	Special Advisor and White House Liaison	SC
NASA	Office of the Administrator	Executive Assistant	SC
NASA	Office of General Council	Associate General Counsel, International Law Practice Group	N/A
NASA	Office of the Chief Financial Officer	Chief Financial Officer	PAS
NASA	Office of the Chief Financial Officer	Policy Analyst	SC
NASA	Office of the Chief Information Officer	Chief Information Officer	N/A
NASA	Office of Diversity and Equal Opportunity	Associate Administrator for Diversity and Equal Opportunity	CA
NASA	Office of STEM Engagement	Associate Administrator for STEM Engagement	CA
NASA	Office of International and Interagency Relations	Associate Administrator for International and Interagency Relations	N/A
NASA	Office of General Counsel	General Counsel	CA
NASA	Office of General Counsel	Deputy General Counsel	CA
NASA	Office of General Counsel	Associate General Counsel, General Law	CA
NASA	Office of General Counsel	Associate General Counsel, Commercial and Intellectual Property Law Practice Group	N/A
NASA	Office of General Counsel	Associate General Counsel, Contracts and Procurement	CA
NASA	Office of Legislative and Intergovernmental Affairs	Associate Administrator for Legislative and Intergovernmental Affairs	NA
NASA	Office of Legislative and Intergovernmental Affairs	Regional Affairs Specialist	SC
NASA	Office of Legislative and Intergovernmental Affairs	Intergovernmental Affairs Specialist	SC
NASA	Office of Legislative and Intergovernmental Affairs	Legislative Affairs Specialist	SC
NASA	Office of Legislative and Intergovernmental Affairs	Legislative Affairs Specialist	SC
NASA	Office of Communications	Associate Administrator for Communications	NA

Agency/Department	Office/Subunit	Title	Type of Appointment
NASA	Office of Communications	Senior Advisor and Press Secretary	SC
NASA	Office of Communications	Deputy Press Secretary, Communications Advisor to the Deputy Administrator	SC
NASA	Office of Communications	Executive Assistant	SC
NASA	Office of Communications	Speechwriter	SC
NASA	Office of Small Business Programs	Associate Administrator for Small Business Programs	CA
NASA	Aeronautics Research Mission Directorate	Associate Administrator for Aeronautics Research Mission Directorate	CA
NASA	Human Exploration and Operations Mission Directorate	Associate Administrator for Human Exploration and Operations	CA
NASA	Science Mission Directorate	Associate Administrator for Science Mission Directorate	CA
NASA	Space Technology Mission Directorate	Associate Administrator for Space Technology Mission Directorate	CA
NASA	Mission Support Directorate	Associate Administrator for Mission Support	CA
NASA	Ames Research Center	Director, Ames Research Center	CA
NASA	Ames Research Center	Chief Counsel	CA
NASA	Armstrong Flight Research Center	Director, Armstrong Flight Research Center	CA
NASA	Armstrong Flight Research Center	Chief Counsel	CA
NASA	Glenn Research Center	Director, Glenn Research Center	CA
NASA	Glenn Research Center	Chief Counsel	CA
NASA	Goddard Space Flight Center	Director, Goddard Space Flight Center	CA
NASA	Goddard Space Flight Center	Chief Counsel	CA
NASA	Johnson Space Center	Director, Johnson Space Center	CA
NASA	Johnson Space Center	Chief Counsel	CA
NASA	Kennedy Space Center	Chief Counsel	CA
NASA	Kennedy Space Center	Director, Kennedy Space Center	CA
NASA	Langley Research Center	Director, Langley Research Center	CA
NASA	Langley Research Center	Chief Counsel	CA
NASA	Marshall Space Flight Center	Director, Marshall Space Flight Center	CA
NASA	Marshall Space Flight Center	Chief Counsel	CA
NASA	Stennis Space Center	Director, Stennis Space Center	CA
NASA	Stennis Space Center	Chief Counsel	CA
NASA	Office of the Inspector General	Inspector General	PAS
National Science Foundation	Division of Atmospheric and Geospace Sciences	Section Head, Geospace Section	N/A

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- ¹ David E. Lewis, “Presidential Appointments and Personnel,” *Annual Reviews*, March 17, 2011 (<https://www.annualreviews.org/doi/full/10.1146/annurev-polisci-042009-121225>).
- ² Recess appointments can last in theory up to almost two years depending on the time they are made. President William J. Clinton made 139 recess appointments, 95 to full-time positions. President George W. Bush made 171 recess appointments, of which 99 were to full-time positions. As of February 1, 2015 [Can we get Obama’s final total?], President Barack Obama had made 32 recess appointments, all to full-time positions (<https://www.senate.gov/CRSPubs/3d313cc2-9515-4533-b1f0-3f762cd09007.pdf>).
- ³ “Government-wide Political Appointee Data and Some Ethics Oversight Procedures at Interior and SBA Could Be Improved,” Government Accountability Office, March 14, 2019 (<https://www.gao.gov/products/GAO-19-249>).
- ⁴ “S. 3896 - PLUM Act of 2020” (<https://www.congress.gov/bill/116th-congress/senate-bill/3896/text>).
- ⁵ “Defense Space Acquisitions: Too Early to Determine if Recent Changes Will Resolve Persistent Fragmentation in Management and Oversight,” Government Accountability Office, July 27, 2016 (<https://www.gao.gov/assets/680/678697.pdf>); “Office of Space and Advanced Technology,” U.S. Department of State (<https://www.state.gov/bureaus-offices/under-secretary-for-economic-growth-energy-and-the-environment/bureau-of-oceans-and-international-environmental-and-scientific-affairs/office-of-space-and-advanced-technology/>); “Bureau of Arms Control, Verification, and Compliance,” U.S. Department of State (<https://www.state.gov/bureaus-offices/under-secretary-for-arms-control-and-international-security-affairs/bureau-of-arms-control-verification-and-compliance/>).
- ⁶ “Defense Space Acquisitions,” Government Accountability Office.
- ⁷ “S.4827 - SPACE Act of 2020,” United States Senate, Introduced October 21, 2020 (<https://www.congress.gov/bill/116th-congress/senate-bill/4827?q=%7B%22search%22%3A%5B%22SPACE+act+of+2020%22%5D%7D&s=1&r=1>).
- ⁸ “Division B - Commerce, Justice, Science, and Related Agencies Appropriations Act, 2010,” U.S. House of Representatives, December 2020 (<https://docs.house.gov/bills/thisweek/20201221/BILLS-116RCP68-JES-DIVISION-B.pdf>); “Office of Space Commerce Wins Bigger Budget in FY 2021, But Will Remain in NOAA,” *Space Policy Online*, December 21, 2020 (<https://spacepolicyonline.com/news/office-of-space-commerce-wins-bigger-budget-in-fy2021-but-will-remain-in-noaa/>).
- ⁹ James A. Vedda, “National Space Council: History and Potential,” Aerospace Corporation, Center for Space Policy & Strategy, November 2016 (<https://aerospace.org/paper/national-space-council-history-and-potential>).
- ¹⁰ Vedda, “National Space Council: History and Potential,” p. 5.
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- ¹² “Presidential Executive Order on Reviving the National Space Council,” The White House, June 30, 2017 (<https://www.whitehouse.gov/presidential-actions/presidential-executive-order-reviving-national-space-council/>).
- ¹³ “DOD Establishes Assistant Secretary of Defense for Space Policy,” U.S. Department of Defense, October 30, 2020 (<https://www.defense.gov/Newsroom/Releases/Release/Article/2400613/dod-establishes-assistant-secretary-of-defense-for-space-policy/#:~:text=Justin%20Johnson%20is%20designated%20as,Mr>); “Welcome to SAF/SP - The Office of the Assistant Secretary of the Air Force for Space Acquisition and Integration,” U.S. Air Force (<https://www.safsa.hq.af.mil/>); “Our Leadership,” Space Development Agency (<https://www.sda.mil/home/leadership/>).
- ¹⁴ “S.4827 - SPACE Act of 2020,” United States Senate; *Space Traffic Management*, National Academy of Public Administration.
- ¹⁵ “Dr. Christopher Ashley Ford: Assistant Secretary, Bureau of International Security and Nonproliferation,” U.S. Department of State (<https://www.state.gov/biographies/dr-christopher-ashley-ford/>); “Jonathan Moore: Acting Assistant Secretary: Bureau of Oceans and International Environmental and Scientific Affairs,” U.S. Department of State (<https://www.state.gov/biographies/jonathan-moore/>).
- ¹⁶ Sandra Erwin, “Undersecretary of Defense Mike Griffin and deputy Lisa Porter stepping down,” *SpaceNews*, June 23, 2020 (<https://spacenews.com/undersecretary-of-defense-mike-griffin-and-deputy-lisa-porter-stepping-down/>).

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About the Center for Space Policy and Strategy

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