WRITTEN TESTIMONY
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Trusting the Tap: Upgrading America's Drinking Water Infrastructure
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Thank you, Chair Tonko, Ranking Member McKinley, and members of the committee. My name is Richard Diaz, and I am the Midwest Regional Field Organizer with the BlueGreen Alliance (BGA), a national partnership of labor unions and environmental organizations. On behalf of my organization, our partners, and the millions of members and supporters they represent, I want to thank you for convening this hearing about upgrading America's drinking water infrastructure.

The BlueGreen Alliance unites America's largest and most influential labor unions and environmental organizations to solve today's environmental challenges in ways that create and maintain quality jobs and build a stronger, fairer economy. Our partnership is firm in its belief that Americans don't have to choose between a good job and a clean environment—we can and must have both. Investing in upgrading our water infrastructure provides an opportunity to address environmental and health impacts, create good jobs, and inject equity into our society as we work to rebuild our economy and recover from the COVID-19 pandemic.

Our nation's drinking water, wastewater, and stormwater infrastructure is vital to the protection, treatment, and distribution of clean water. However, age, strain from population growth, lack of investment, the pervasiveness of lead pipes, and emerging threats from climate change have increased the burden on the current water infrastructure system and the health risks to communities. The nation's wastewater and drinking water infrastructure received grades of "D+" and "C-" by the American Society of Civil Engineers (ASCE), respectively.[i]

Maintenance and improvement of water infrastructure have become increasingly difficult for communities to afford. As these costs are passed on to consumers, existing affordability problems are exacerbated for many communities and individuals across the

country. Communities of color and low-income communities are disproportionately affected by unaffordable water rates and failing water infrastructure.[ii] The cost of water and wastewater services have more than doubled in the past 20 years, at the same time incomes of low and moderate income households have essentially remained unchanged.[iii] Federal water infrastructure funding can address this problem by directing assistance to the communities that need it most—like those facing large gaps between their infrastructure needs and their ability to pay.

Finally, the COVID-19 pandemic cast a spotlight on—and exacerbated—the fissures in our economy and social safety net. Unsurprisingly, the burden of COVID-19 cases and deaths in the U.S. fall disproportionately on people of color.[iv] It also magnified the existing challenges facing communities and their water systems as access to clean, safe water for handwashing and disinfecting became a key preventative measure.

The good news is that the water infrastructure investments in the Bipartisan Infrastructure Law (BIL) are a win-win. Water infrastructure investments will boost our economy and create and sustain thousands of jobs while ensuring communities have safe water and water systems resilient to climate change. The BIL invests $55 billion in our water systems—the largest federal investment ever. This $55 billion is a significant down payment on the $434 billion investment gap identified in the ASCE 2021 infrastructure report card[v].

We have the opportunity to address some of these challenges as we work to implement the Bipartisan Infrastructure Law (BIL), and do so in a way that protects and creates good union jobs, delivers public health and environmental benefits, addresses economic and racial injustice head on, and creates a cleaner, stronger, and more equitable economy for all.

The BIL includes the largest federal investment in water *ever*, but more is needed. The BIL only includes a third of the total funding needed for full lead service line replacement. Additionally, the legislation provides no funding for low-income water assistance, and other funding gaps for other critical water infrastructure programs such as the U.S. Environmental Protection Agency's (EPA) Small and Disadvantaged Communities Program. Some of these gaps are filled in House-passed budget reconciliation legislation.

The investments and policies included in the BIL—when coupled with a robust budget reconciliation bill—will create good-paying, union jobs across the nation while improving public health and helping tackle income and racial injustice.

The BIL Provides Key Investments in Water Infrastructure

Lead Service Line Replacement

The BIL provides a little over $15 billion to fund the replacement of lead service lines and other lead remediation activities. This funding is important to improving public health and addressing inequality. As many as 12.8 million homes[vi] around the country get their water through lead pipes and service lines. Lead is a toxic metal that harms the brain and nervous system and is especially harmful during pregnancy and infancy when it can decrease IQs, diminish academic abilities, and increases attention deficits and other problem behaviors.

There is no safe exposure level. Even the lowest blood lead levels can affect the developing brain and central nervous system having irreversible effects. Communities of color and lower-income communities often bear a disproportionate brunt of the hazards of lead water contamination.[vii] Eliminating lead exposure in our water systems can not only keep communities safe and healthy, but also create good-paying jobs and boost local economies across the country—particularly if members of the impacted communities themselves are hired to do this work. Analysis by the BlueGreen Alliance found the $15 billion for lead service line replacement in the BIL would result in the creation of 200,700 jobs over 10 years. Adding the additional $10 billion for lead service line replacement included in the house-passed Build Back Better Act, would result in 131,250 direct, 84,500 indirect, and 118,750 induced jobs, a total of 334,500 jobs over 10 years.[viii]

Investing in lead service line replacement not only prevents lead poisoning and creates jobs, but also saves taxpayers money in the long run. According to the Centers for Disease Control and Prevention's (CDC) 2019 Healthy Housing fact sheet, keeping the blood lead levels of all children across the country born in 2018 at zero would result in $84 billion dollars in future benefits.[ix] This includes saving billions of dollars in health care and education savings, as well as increasing future earning potential. Protecting children born in 2018 from lead poisoning would result in a cumulative increase of lifetime earnings somewhere in the ballpark of $77 billion dollars.[x] My home state of Wisconsin reports that if lead poisoning in children were completely eliminated, annually the state would save $7 billion in costs for medical treatments, special education, crime, and juvenile delinquency.[xi]

PFAS and Emerging Contaminants

Lead is not the only public health concern. In addition to lead, contaminated water exposes communities to harmful chemicals such as arsenic and per- and polyfluoroalkyl substances (PFAS). More than 27 million Americans get their water from systems that violate health standards, and again, low-income communities and communities of color are disproportionately impacted by this contaminated water.[xii] The BIL funds a $10 billion down payment on the cleanup of PFAS and other emerging contaminants. This includes $5 billion in grants for small and disadvantaged communities, $4 billion for utilities to address PFAS in drinking water systems, and $1 billion to help wastewater utilities address PFAS in wastewater discharge. Right now, most utilities do not test for the presence of PFAS or remove them from water they serve. This funding is an important down payment that will allow the country to begin tackling this problem.

Drinking and Clean Water Infrastructure

The aging state of our nation's water infrastructure is staggeringly wasteful. Many U.S. communities rely on pipes that are a century old. These pipes leak 6 billion gallons of clean drinking water daily—approximately 14% of treated water—wasting energy and water and disrupting businesses and communities. Additionally, there are an estimated 240,000 water main breaks per year in America—or 700 per day.[xiii] All that waste from ineffective water distributions systems adds up to a lost $2.6 billion dollars a year in the United States—enough water for 68 million Americans.[xivxv] Estimates suggest aggressive action to remedy our ailing water systems could save $1.7 billion,[xvi] and a Chicago State University study showed that reducing the amount of water leaked annually in the U.S. by only 5% would save enough energy to power 31,000 homes for a year and cut 225,000 metric tons of CO2 emissions.[xvii]

Climate change also strains our nation's water infrastructure. The Drinking Water and Clean State Revolving Funds (DWSRF/CWSRF) are the main sources of funding for states not only to update and maintain water infrastructure, but also to ensure that this infrastructure is resilient to climate change. One study from the National Association of Clean Water Agencies (NACWA) estimated that states will need an additional $448 to $944 billion dollars by 2050 to reengineer water systems to cope with sea level rise, extreme weather events, droughts, and floods.[xviii] The EPA estimates that just that capital cost of clean and drinking water infrastructure over the next 20 years is $744 billion dollars.[xix] The DWSRF and CWSRF received a historic infusion of funding in the BIL—$23.5 billion—split equally between the two programs. This is a massive step forward, and

provides a significant down payment on the investment needed to upgrade our water systems.

Maximizing benefits for workers and communities

The water infrastructure investments made by the BIL will greatly benefit the construction industry. For example, the plumbing, pipefitting, and steamfitting industry currently employs 324,500 workers and is expected to see job growth around 15.6% through 2026.[xx] Similar job growth will occur in other water infrastructure jobs. For example, pipelayers will see a 17.2% increase above the current 33,810 jobs, and other related jobs will see an 18.6% increase.[xxi] BIL water infrastructure investments will also accelerate job growth in every sector of the economy. This means increased numbers of steelworkers, utility workers, painters, laborers, operating engineers, electricians, public sector employees, and other union workers to manufacture, maintain, upgrade, and operate these systems. We need steelworkers to manufacture the pipes, painters to apply the industrial coatings that protect water infrastructure from corrosion, plumbers and pipefitters to replace lead service lines, and utility workers to ensure that drinking water is clean and wastewater is treated and made safe for the public and the environment. We have to make sure these are not just good jobs, but *accessible* jobs. This means supporting and growing pathways into good union jobs—often through apprenticeships and pre-apprenticeships—in these and other sectors for workers of color and other segments of the population historically underrepresented in these jobs.

At the same time, challenges remain in recruiting, training, and retaining workers in the water sector—one-third of the water sector workforce is eligible for retirement in the next decade.[xxii] Additionally, roughly 85% of water workers are male and two-thirds are white.[xxiii] There is clearly a need for younger, more diverse workers. This is especially crucial if the communities most impacted by failing water infrastructure are to see the full benefits of the jobs created by BIL funding. The BIL addresses this by directing EPA to establish an interagency working group and reauthorizing and expanding the Innovative Water Infrastructure Workforce Development Grant Program. Both of these actions are intended to address recruitment, training, and retention of the water sector workforce.

Workforce funding included in the BIL will also support existing union training and apprenticeship programs. For example, the United Association of Union Plumbers and Pipefitters (UA) has dozens of training centers across the country. One of these training centers, run by Plumbers Local 5 and located just outside Washington D.C., has been training apprentices since 1940. Another example is the Utility Workers Union (UWUA)'s "Power for America Training Trust Fund" which provides critical training that

helps ensure workers and employers in high-hazard industries maintain safety and worker protection in the workplace. Well-trained workers are safer workers and, in turn, are better equipped to ensure communities receive the best possible service.

A number of policy levers exist to build a competitive clean economy and help ensure that investments create good, union jobs, community benefits—particularly for targeted constituencies—and help reduce the income inequality that has harmed the American middle class. The BIL includes some codified policy tools, and notably, runs most water infrastructure funding through the CWSRF and DWSRF. Two key policies, Buy America and Davis Bacon, have long been attached to the funding in these SRFs. EPA's recent implementation guidance clearly states the agency's intention to uphold and enforce these policies in BIL implementation.[xxiv]

Davis Bacon & Buy America

Davis Bacon Prevailing Wage establishes a wage floor for each occupation that all contractors on a project must pay at or above—typically set to reflect the average or market wage for workers employed in the construction industry. Many state and local governments establish a prevailing wage for public works projects, and at the federal level, the Davis Bacon Act establishes prevailing wage rates for federal construction projects. Requirements or incentives for contractors to pay the prevailing wage can be extended to privately developed projects such as new power generation facilities. Davis Bacon applies to nearly all the water infrastructure funding in the BIL, ensuring that workers will receive good wages for these projects.

Buy America is a domestic procurement policy requiring certain materials for public infrastructure projects to be produced in the United States. Buy America domestic procurement requirements have a long-standing history of maximizing the return on investment to taxpayers and our economy. Requiring domestic content in infrastructure projects boosts domestic workers and manufacturers, and creates broad economic growth while spurring domestic manufacturing. According to the Alliance for American Manufacturing, Buy America provisions lead to a 33% increase in manufacturing jobs per dollar of public spending.[xxv] A GAO report found that water projects subject to Buy America provisions in the American Recovery and Reinvestment Act of 2009 were lower in cost than estimated.[xxvi]

The investments included in the BIL will be massive job creators not just at project sites across the nation, but—thanks to strong domestic procurement policy—will also support American manufacturing. Infrastructure projects in particular are massive undertakings

requiring huge amounts of building materials like iron, steel, and concrete. These are materials that have been manufactured in the United States for decades and longer, but—due in part to misguided trade policy and a lack of adequate industrial policy—these industries have taken a hit as global competition has grown. It is critical that the taxpayer dollars being used to fund the historic investments in these two bills are used in ways that support American manufacturing and workers and communities here at home. This can be accomplished through strong domestic procurement policies such as those embedded in the Drinking and Clean Water SRFs and found in EPA's implementation guidance.[xxvii] The BIL also permanently extended Buy America for funding distributed from the DWSRF, making it equivalent with CWSRF policy.

One example of how American manufacturing and workers directly benefit from Buy America can be found at McWane Ductile Pipe in Coshocton, Ohio. At this facility, members of United Steelworkers Local 7014 produce ductile iron pipe used in water infrastructure. Buy America helps keep this facility open and provides the foundation for more good union jobs in decades to come.

The BIL also includes a significant expansion and modernization of Buy America called "Build America, Buy America" (BABA). Buy America requirements already extended to public-works transportation and water-related infrastructure. BABA will expand the application of Buy America preferences to nearly all infrastructure programs and projects, and will ensure that Buy America is applied more consistently and with fewer waivers, which will not only create more opportunities for American workers to benefit from federal infrastructure investments, but will improve the efficiency with which these preferences are applied.

Additional Labor Provisions

The EPA has indicated that it will encourage the use of additional high-road labor standards in BIL funding, but enforcement will also be necessary. Other provisions that will be needed to ensure the jobs created by BIL infrastructure investments are *good jobs* include:

- **Registered apprenticeship, pre-apprenticeship programs, and other union-affiliated training programs.** Strong unions can play a key role in promoting diversity, equity, justice, and inclusion within these programs. A BlueGreen Alliance analysis of the U.S. Department of Labor's (DOL) Registered Apprenticeship Partners Information Database System (RAPIDS) found that in the construction industry, 43% of apprentices were people of color in union programs,

compared to 33% people of color in non-union programs. However, enrollment in these programs only shows one small metric by which to judge if these programs work to advance the careers of people of color. For true equity and justice to be sustained, officials must focus not solely on enrollment rates, but must carry that focus to retention and promotion within the workplace, that means, in part, working to ensure that apprentices have not only the technical skills, but also the professional tools they need to succeed. Through its BIL implementation guidance, the EPA Office of Water has explicitly said it will "encourage pre-apprenticeship, registered apprenticeship, and youth training programs that open pathways to employment."[xxviii]

Pre-apprenticeship programs in particular have become a key tool to improving diversity in the building trades. Such programs aim to ensure that workers can qualify for entry into an apprenticeship program and have the skills they need to succeed. These programs are generally designed to target certain populations or demographics such as low-income workers, workers of color, women, and other marginalized communities. Additionally, many unions offer training throughout a member's career to enable them to stay up to date with changes in technology.

- **Project Labor Agreements (PLAs), Community Workforce Agreements (CWAs), and Community Benefit Agreements (CBAs).** PLAs are collective bargaining agreements that are negotiated in advance of a project. The encouragement of the use of PLAs on federally funded projects is not a new policy. In a 2009 executive order, former President Obama ordered that "it is the policy of the Federal Government to encourage executive agencies to consider requiring the use of project labor agreements in connection with large-scale construction projects in order to promote economy and efficiency in Federal procurement." Community Workforce Agreements (CWAs) and Community Benefit Agreements (CBAs) are beneficial tools for communities when included with PLAs. They can be more expansive in scope, and are sometimes negotiated with both union and community partners. CWAs go beyond PLAs and are focused on creating opportunity in, and maximizing benefits to, local communities. In addition to the collective bargaining aspects of a PLA, CWAs frequently include local hire provisions, targeted hire of low-income or disadvantaged workers, and the creation of pre-apprenticeship pathways for careers on the project. EPA's BIL implementation guidance says it will "encourage SRF funding recipients to support safe, equitable, and fair labor practices by adopting collective bargaining agreements, local hiring provisions (as applicable), project labor agreements, and community benefits agreements."[xxix]

Justice40 and Other Targeted Community Investments

The BlueGreen Alliance is working to ensure that the BIL will improve economic, racial, and environmental justice across the United States. Our approach is informed by our Solidarity for Racial Equity platform and the Biden administration's Justice 40 Initiative. To ensure that new government policies help dismantle structural racism and target federal resources to the workers and communities that need them most, President Biden established a Justice40 Initiative to ensure that 40% of federal investments benefit disadvantaged communities. This includes funding set asides, funding prioritization, and guidance that instructs agencies to maximize benefits for communities or workers, including environmental justice communities and/or communities impacted by energy transition. .

The BIL includes a number of significant changes to underlying law that will help direct funding to communities that need it the most, including significant changes to SRF policy. A minimum of 49% of BIL funding must be distributed as grants or forgivable loans, and the state match requirement reduced to 10% for the first two years of funding. In addition, the BIL makes permanent changes to SRF funding. This includes increased authorization levels for both SRFs, and the first-ever permanent requirements that states annually put a minimum of 10% CWSRF and 12% of DWSRF funds towards grants and forgivable loans. Importantly, these changes apply to all future appropriated funds, not just the one-time influx of BIL funding.

The EPA's implementation guidance also focuses on maximizing equitable implementation of the BIL's water infrastructure investments, including working quickly to replace lead service lines; prohibiting partial lead service line replacement, and requiring states to resubmit Intended Use Plans (IUPs) to ensure that disadvantaged communities benefit equitably from these investments, and providing technical assistance for communities applying for BIL funds. It will be crucial that EPA—and Congress—conduct oversight to ensure these funds deliver clean, safe water to communities across the country.

With the right tools in place, the investments included in the BIL can not only repair our infrastructure, help address the climate crisis, and revitalize our manufacturing sector, but can also fight the interconnected crises of income inequality and racial inequity: by incentivizing the use of union labor, mandating that workers are paid a fair wage, utilizing registered apprenticeship and pre-apprenticeship programs, ensuring equitable access to the jobs that these bills will create, prioritizing workers and communities most in need, and building pathways into good-paying careers for workers across the nation.

Conclusion

The BIL will help rebuild and modernize our nation's water infrastructure and create good-paying, union jobs across the nation while making some important investments to address climate change. Careful attention to implementation will be needed to ensure the bill translates into benefits for the environment and disadvantaged communities, and that the law will create high quality union jobs not only at construction job sites, but at manufacturing facilities down the supply chain through the use of strong labor and equity provisions.

Thank you again for the opportunity to speak today.

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[i] American Society of Civil Engineers, *2021 Report Card for America's Infrastructure*, 2021. Available online: https://infrastructurereportcard.org/wp-content/uploads/2020/12/National_IRC_2021-report.pdf

[ii] Clean Water For All, *Water, Health, and Equity: The Infrastructure Crisis Facing Low-Income Communities & Communities of Color — and How to Solve It*, 2018. Available online: https://www.nrdc.org/sites/default/files/media-uploads/cwfa_infrastructure_health_equity_white_paper_-_oct_2018.pdf

[iii] Brookings, "Striking a better balance between water investment and affordability," 2016. Available online: https://www.brookings.edu/blog/the-avenue/2016/09/12/striking-a-better-balance-between-water-investment-and-affordability/

[iv] Kaiser Family Foundation, *COVID-19 Cases and Deaths by Race/Ethnicity: Current Data and Changes Over Time*, February 2022. Available online: https://www.kff.org/racial-equity-and-health-policy/issue-brief/covid-19-cases-and-deaths-by-race-ethnicity-current-data-and-changes-over-time/

[v] Ibid.

[vi] Natural Resources Defense Council, Lead Pipes are Widespread and Used in Every State, 2021. Available online: https://www.nrdc.org/lead-pipes-widespread-used-every-state

[vii] Centers for Disease Control, Childhood Lead Poisoning: Population at Higher Risk. Available online: https://www.cdc.gov/nceh/lead/prevention/populations.htm

[viii] BlueGreen Alliance, *Build Back Better Investments Will Create Jobs Across the Country*, 2021. Available online: https://www.bluegreenalliance.org/site/build-back-better-investments-will-create-jobs-across-the-country/safe-drinking-water/

[ix] Centers for Disease Control, *2019 Healthy Housing Fact Sheet*. Available online: https://nchh.org/resource-library/fact-sheet_healthy-housing-agency_2019-bundle.pdf

[x] Pew Charitable Trusts, *10 Policies to Prevent and Respond to Childhood Lead Exposure: An assessment of the risks communities face and key federal, state, and local solutions*, 2017. Available online: https://www.pewtrusts.org/en/research-and-analysis/reports/2017/08/10-policies-to-prevent-and-respond-to-childhood-lead-exposure

[xi] Wisconsin Department of Health Services, *2014 Report on Childhood Lead Poisoning in Wisconsin*, 2014. Available online: https://www.dhs.wisconsin.gov/publications/p01202-14.pdf

[xii] Maximum Contaminant Level Goals and National Primary Drinking Water Regulations for Lead and Copper, 56 Fed. Reg. 26,460, 26,468 (June 7, 1991) (codified at 40 C.F.R. Part 141 Subpart I) ("Lead and Copper Rule")

[xiii] American Society of Civil Engineers, *2021 Report Card for America's Infrastructure*, 2021. Available online: https://infrastructurereportcard.org/wp-content/uploads/2020/12/National_IRC_2021-report.pdf

[xiv] U.S. EPA *Aging Water Infrastructure Research Program: Addressing The Challenge Through Innovation*, 2007. Available online: https://cfpub.epa.gov/si/si_public_record_report.cfm?dirEntryId=185093.

[xv] ITT Corporation, *Value of Water Survey*, October 2010. Available http://www.itt.com/News/Releases/2010/ITT-s-Value-of-Water-Survey-reveals-that-Americans/

[xvi] Water in the West, *Water and Energy Nexus: A Literature Review*, 2013. Available online: http://waterinthewest.staford.edu/sites/default/files/Water-Energy_Lit_Review_0.pdf
[xvii] Chicago State University, *The Carbon Footprint of Water*, 2009. Available online: http://www.csu.edu/cerc/researchreports/documents/CarbonFootprintofWater-RiverNetwork-2009.pdf
[xviii] National Association of Clean Water Agencies (NACWA), *Confronting Climate Change: An Early Analysis of Water and Wastewater Adaptation Costs*, 2009. Available online: https://www.amwa.net/galleries/climate-change/ConfrontingClimateChangeOct09.pdf
[xix] Congressional Research Service (CRS), U.S. Environmental Protection Agency (EPA) Water Infrastructure Programs and FY2021 Appropriations, 2021. Available online: https://crsreports.congress.gov/product/pdf/IF/IF11724/3
[xx] Bureau of Labor Statistics, "The employment outlook for occupations tasked with building America's infrastructure," 2018. Available online: https://www.bls.gov/opub/btm/volume-7/the-employment-outlook-for-occupations-tasked-with-building-americas-infrastructure.htm?view_full
[xxi] Brookings, *Metropolitan Policy Program*, *Renewing the Water Workforce*, June 2018. Available online: https://www.brookings.edu/wp-content/uploads/2018/06/Brookings-Metro-Renewing-the-Water-Workforce-June-2018.pdf
[xxii] Environmental Protection Agency, Water Sector Workforce. Available online: https://www.epa.gov/sustainable-water-infrastructure/water-sector-workforce
[xxiii] Brookings, *Metropolitan Policy Program*, *Renewing the Water Workforce*, June 2018. Available online: https://www.brookings.edu/wp-content/uploads/2018/06/Brookings-Metro-Renewing-the-Water-Workforce-June-2018.pdf
[xxiv] Environmental Protection Agency, "Memorandum: Implementation of the Clean Water and Drinking Water State Revolving Fund Provisions of the Bipartisan Infrastructure Law," March 2022. Available online: https://www.epa.gov/system/files/documents/2022-03/combined_srf-implementation-memo_final_03.2022.pdf
[xxv] Alliance for American Manufacturing, *How Infrastructure Investments Support the U.S. Economy: Employment, Productivity, and Growth.* January 2009. Available at http://s3-us-west-2.amazonaws.com/aamweb/uploads/research-pdf/Infrastructure_2009.pdf
[xxvi] GAO, *Clean Water Projects Are Underway, but Procedures May Not Be in Place to Ensure Adequate Oversight*. May 2010. Available at: https://www.gao.gov/assets/130/124764.pdf
[xxvii] Environmental Protection Agency, "Memorandum: Implementation of the Clean Water and Drinking Water State Revolving Fund Provisions of the Bipartisan Infrastructure Law," March 2022. Available online: https://www.epa.gov/system/files/documents/2022-03/combined_srf-implementation-memo_final_03.2022.pdf
[xxviii] Environmental Protection Agency, "Memorandum: Implementation of the Clean Water and Drinking Water State Revolving Fund Provisions of the Bipartisan Infrastructure Law," March 2022. Available online: https://www.epa.gov/system/files/documents/2022-03/combined_srf-implementation-memo_final_03.2022.pdf
[xxix] Ibid.