SECTION 84—CHARACTER CLASSIFICATION (SCHEDULE C)

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Summary of Changes

Revises the definitions for networking and information technology R&D and national nanotechnology initiative (section <u>84.4</u>).

84.1 What is the purpose of the character classification system?

We use character classification to distinguish between investment and non-investment activities. Investments finance activities that yield benefits largely in the future. We also use character classification to report data on grants to State and local governments separately from direct Federal programs. Character class line numbers include the following:

- Investment activities:
 - Lines 13xx, physical assets.
 - Lines 14xx, research and development (R&D).
 - Lines 15xx, education and training.
- Non-investment activities:
 - Lines 2xxx.

The classification system also allows for compilation of additional information on R&D funding that is used by OMB and others in the review of agency budget requests, Government-wide resource allocation, and R&D budget presentations.

See exhibit <u>84</u> for a summary of character classification line numbers. See section <u>84.4</u> for detailed descriptions of all of the line numbers that you must use to report character classification.

84.2 What terms do I need to know?

(a) State or local governments.

For preparing character classification data, State or local governments include the following:

- The 50 States and the District of Columbia.
- Cities, counties, townships, school districts, special districts, and other local governmental units, as defined by the Bureau of the Census.

- Puerto Rico, the Virgin Islands, and other U.S. territories.
- The Federated States of Micronesia, Marshall Islands, and Palau, if the payments are a relatively small part of the accounts that have grants to State or local governments.
- Indian Tribal governments when:
 - The legislation authorizing the payment includes such entities within the definition of eligible State or local units.
 - The Tribal government acts as a nonprofit agency operating under State or local auspices.
- Quasi-public nonprofit entities, such as community action agencies, when the boards of such entities must either be elected in State or local elections, or must include significant representation of State or locally-elected officials.
- (b) *Grants to State and local governments.*

Report budget authority and outlays as grants to State and local governments if the Federal government's resources support State or local programs of government operations or provision of services to the public. For reporting character classification data for grants, include the following:

- Direct cash grants to State or local governmental units, to other public bodies established under State or local law, or to their designee.
- Payments for grants-in-kind, such as purchases of commodities distributed to State or local governmental institutions (e.g., school lunch programs).
- Payments to nongovernmental entities when such payments result in cash or in-kind services or products that are passed on to State or local governments, for example, payments to the Corporation for Public Broadcasting, or to the American Printing House for the Blind.
- Payments to regional commissions and organizations that are redistributed at the State or local level to provide public services.
- Payments to State and local governments for research and development that is an integral part of
 the State and local governments' provision of services to the general public (e.g., research on
 crime control financed from law enforcement assistance grants, or on mental health associated
 with the provision of mental rehabilitation services; see discussion below for exclusions related to
 research and development and payments for services rendered).
- Direct loan or loan guarantee subsidies to State or local governments.
- Shared revenues. These payments to State or local governments are computed as a percentage of the proceeds from the sale of certain Federal property, products, or services (e.g., payments from receipts of Oregon and California grant lands). Also included are tax or other collections by the Federal Government that are passed on to State or local governments (e.g., internal revenue collections for Puerto Rico).

Exclude the following:

- Federal administrative expenses associated with grant programs.
- Grants directly to profit-making institutions, individuals, and non-profit institutions not covered above, for example, payments to Job Corps centers and trainees.
- Payments for research and development not directly related to the provision of services to the general public, for example, basic research awarded via competitive grants.
- Payments for services rendered, for example, utility services, training programs and expenses for Federal employees, research and development for Federal purposes conducted under contracts, grants, or agreements by such agencies as the National Institutes of Health (NIH), the National Science Foundation (NSF), the Department of Energy (DOE), the National Aeronautics and Space Administration (NASA), and the Department of Defense (DOD).
- Federal grants to cover administrative expenses for regional bodies and other funds not redistributed to the States or their subordinate jurisdictions, for example, the administrative expenses of the Appalachian Regional Commission.
- (c) Direct Federal programs.

Federal programs that are not classified as grants to State and local governments will be classified as direct Federal programs.

84.3 What do I need to know about reporting the data and relationships with other data requirements?

- (a) General requirements.
 - If an account has only one character class code, MAX will automatically generate the amounts for schedule C.
 - Report credit program accounts related to investments (i.e., for physical assets, the conduct of research and development, or the conduct of education and training) net of offsetting collections.
 - Report budget authority and outlays by subfunction.
 - Do not report character class for credit financing accounts.
 - OMB does not control centrally the addition or deletion of character classification codes of expenditure accounts. If the nature of an account changes or otherwise requires the use of different classes, you may add (or delete) the appropriate code and enter budget authority and outlays in MAX in that code without advance approval from OMB.
 - If a transaction fits into more than one classification, report it in the classification category with the lowest numerical character classification code. For example, record amounts for construction of research and development facilities in the appropriate 13xx grouping, not in the 14xx grouping.

- If accounts are split between two or more character classifications, omit a classification involving less than \$1 million in each of the three fiscal years, and include the amounts in some larger classification for that particular account.
- Grants: Report grants by BEA subcategory (e.g. discretionary or mandatory). In some cases, grants to State and local governments allow the recipient jurisdiction the option of using funds for current or investment-type purposes, such as in community development block programs. In such instances, record all of the budget authority and outlays for grants in the category where the majority of the funds is anticipated to be used.
- Research and development: Schedule C contains memorandum entries on lines 1463–xx through 1467–xx that supplement, and are a subset of, R&D information reported on lines 1311–xx through 1432–xx. Use the entries on lines 1463–xx through 1467–xx to report information on crosscutting R&D data for specific areas identified by the National Science and Technology Council (NSTC) and required by law.
- (b) Reporting offsetting collections (expenditure accounts).

Offsetting collections are reflected in schedule C. The sum of budget authority and outlay entries in schedule C (excluding memorandum entries) will equal budget authority and outlays net of offsetting collections. In almost all cases, offsetting collections will be included in character class code 2004 (direct Federal, noninvestment) and netted from the other budget authority and outlays for that code as described below. An exception would be offsetting collections from the sale of physical assets (e.g. land, structures, equipment, or commodities), which will be reported as negative amounts in the corresponding physical asset character classes.

Identify first the budget authority and outlays for investments and grants (if any) and classify this spending in the appropriate character class code (i.e., character class codes 1xxxx, 2001, or 2003). For the remaining spending and offsetting collections, use character class code 2004 as a residual balancing entry to ensure that the sum of entries in schedule C add to total net budget authority and outlays. This means that in some cases, character class code 2004 amounts can be negative.

As an example, consider an account with net outlays of zero that receives \$50 million in offsetting collections from the public and spends all of it. If half of the outlays are for direct Federal construction (non-R&D) (character class code 1314) and half for direct Federal noninvestment (character class code 2004), then character class code 1314 would show \$25 million in outlays for construction, and character class code 2004 would show a net \$-25 million. The \$-25 million can be thought of two ways: as a residual balancing entry to ensure that total net outlays are zero, or as the sum of \$25 million for direct Federal noninvestment, and \$-50 million for collections from the public. The sum of all character class codes would add to net outlays and, in this example, would be zero.

(c) Classifying activities financed by offsetting collections from Federal sources.

If grants to State or local governments or investments are financed by payments from one Federal account to a second Federal account (i.e., offsetting collections from Federal sources), you must ensure that the amounts are recorded as grants or investments only once (i.e., ensure that they are not double-counted). As a general rule, the amounts should be recorded as follows:

- For all grants to State or local governments, record the grants in the second account, i.e., the account that actually makes the payment to the State or local government.
- For direct Federal investment (which includes all investments except grants to State or local governments), record the investment in the account that is primarily responsible for funding the

investment. (Note that grants to research institutions are classified as direct Federal investment, not as grants to State or local governments.) This is usually the initial account. For example, if the Environmental Protection Agency provides funds to the National Science Foundation for research, record the R&D in the EPA account that funds the research, not in NSF. However, in certain cases, primary responsibility might occur in the second account. For example, regarding rental payments to the GSA Federal Buildings Fund, some of the rental receipts may ultimately be used for construction by GSA. In these situations, the investment should be recorded in the second account because primary responsibility for the investment would be in that account.

(d) Reporting offsetting receipts (receipt accounts).

You must also report offsetting receipts for PY through BY by character class in schedules K and R. OMB controls the character classification of offsetting receipts centrally, and you must ask your OMB representative to change the classification in the Budget Account Title (BAT) file before you can enter data under a different code. (See section 79.3 for proposing changes to the BAT file.)

Report character class information for collections deposited in offsetting receipt accounts in schedules K (baseline) and R (policy) using the instructions in section 81.3(d). You must use line 2004–xx for offsetting receipt accounts, with the following two exceptions:

- Report the proceeds from the sale of physical assets (e.g., land, structures, equipment, or commodities) in the corresponding physical asset character classes; and
- Report credit reform offsetting receipt accounts for downward reestimates and negative subsidies for investment-related programs (i.e., for physical assets or for the conduct of education and training) on the appropriate investment line number (i.e., 13xx or 1512).
- (e) Relationships with other data requirements.

You should be able to reconcile information reported in this schedule related to the conduct of research and development with information reported in the National Science Foundation Annual Survey of Federal Funds for Research and Development (see description of line 14xx).

Actual outlays for past year grants and shared revenue must be consistent with the respective amounts reported to the Department of Commerce, Bureau of the Census, pursuant to the instructions regarding its "Federal Aid to States" publication.

(f) Outyear projections.

A-11 data will be reported for PY through BY. MAX will automatically generate outyear projections of grant outlays through BY+9 based on in-year data. Other entries will be shown through BY only.

For the projection of grant outlays, using an algorithm, MAX will assume that the percentage of grant outlays estimated for the outyears is the same as that reported in the BY. For example, if 18 percent of outlays in the account are on line 1511–02 (grant outlays for education and training) in BY, then 18 percent of net outlays will be estimated on line 1511–02 for each outyear. Agencies may view these outyear projections on-screen. If projections do not accurately reflect outyear policy, you may override the projections by entering the correct amounts (not percentages) directly into MAX.

84.4 How do I report character classification in MAX?

Character class data in schedules C, K, and R are identified by a line number that consists of a four-digit number and a two-digit suffix (xxxx–xx). The line number identifies data as investment or noninvestment, and as grants or direct Federal programs.

Classify all investment activities in the 1xxx series and all noninvestment activities in the 2xxx series. For credit program accounts, classify subsidies for direct loans and loan guarantees and their administrative expenses according to the purpose of the program. For example, credit subsidies for construction should be in the character class for construction and rehabilitation, and credit subsidies for the conduct of education should be in the character class for the conduct of education and training. The two-digit suffix differentiates among budget authority, outlays, and offsetting receipts, as follows:

- 01—Budget authority.
- 02—Outlays.
- 03—Offsetting receipts.
- 04—Obligations (for climate change memorandum (non-add) R&D entries only).

Ensure that data are reported in the correct categories. For example, report data on R&D activities using the appropriate R&D character class entries. Report data on activities other than R&D in non-R&D character classes. Only some of the following codes apply to offsetting receipts; they are specifically noted below with an asterisk (*). All of the line numbers (except for the Memorandum (non-add) R&D entries) apply to budget authority and outlays.

The following table indicates the line numbers you use to report character classification. See exhibit 84 for a summary of the coding structure.

	Entry	Description
1xxx I	NVESTMENT ACTIVITIES	Budget authority, outlays, or offsetting receipts for programs that yield benefits largely in the future.
13xx Phy	vsical assets:	Amounts for the purchase, construction, manufacture, rehabilitation, or major improvement of physical assets regardless of whether the assets are owned or operated by the Federal Government, States, municipalities, or private individuals. Physical assets are land, structures, equipment, and intellectual property (e.g., software) that have an estimated useful life of two years or more; and commodity inventories. The cost of the asset includes both its purchase price and all other costs incurred to bring it to a form and location suitable for its use.
131x Cc	onstruction and rehabilitation:	Amounts for construction and rehabilitation, including both grants and direct Federal programs. Construction and rehabilitation means the design and production of fixed works and structures or substantial alterations to such structures or land. Includes new works and major additions, alterations, improvements to and replacements of existing works. Excludes preliminary surveys, maintenance, repair, administration of such facilities and other Federal operating expenses.
	Research and development facilities:	Amounts for the construction and rehabilitation of
1311-xx	Grants to State and local governments	research and development facilities (see category 14xx for the definition of research and development).
1312-xx	major repa use in R& buildings, whether th	Includes the acquisition, design, and construction of, or major repairs or alterations to, all physical facilities for use in R&D activities. Facilities include land, buildings, and fixed capital equipment, regardless of whether the facilities are to be used by the Government or by a private organization, and regardless of where

Entry	Description
	title to the property may rest. Includes the international space station and such fixed facilities as reactors, wind tunnels, and particle accelerators.
	Include:
	 Construction of R&D facilities only.
	Exclude:
	• Other facility funding (show on line 1313–xx or 1314–xx).
	 Movable R&D equipment (show on line 132x- xx).
Other construction and rehabilitation:	Amounts for all other construction and rehabilitation.
1313–xx Grants to State and local government	ts
1314–xx Direct Federal programs	
132x Major equipment:	Amounts for identifiable items of major equipment, including information technology (see section 53), vehicles, ships, machine tools, aircraft, tanks, satellites and other physical assets in space, and nuclear weapons. Excludes routine purchases of ordinary office equipment or furniture and fixtures. However, where there are major programs for acquisition of equipment, includes all equipment purchases.
Research and development equipment:	Amounts for major equipment for research and
1321–xx Grants to State and local government 1322–xx Direct Federal programs	development. (See category 14xx for the definition of research and development.) Includes acquisition or design and production of movable equipment, such as spectrometers, research satellites, detectors, and other instruments. At a minimum, this line should include programs devoted to the purchase or construction of R&D equipment.
Other major equipment:	Amounts for all other major equipment.
1323–xx Grants to State and local government	ts
1324–xx Direct Federal programs	
Commodity inventories:	Amounts for federally-owned commodities held for
1330–xx* Direct Federal programs	resale or in stockpiles.
Proceeds from the sale of commodition	Offsetting receipts collected from the sale of federally- owned commodities that were previously purchased by the government or from reduction in stockpiles.
Purchases and sales of land and structures	
Federal use:	land and structures for use by the Federal Government and sales of such land and structures. Includes office
1340–xx* Direct Federal programs	buildings and park and forest lands. Does not include land or structures acquired as temporary inventory, such as collateral on defaulted loans.
Receipts from sales of property or as	Offsetting receipts collected from sales of federally-owned property or assets used by the Federal

	Entry	Description
		Government. Includes office buildings and park and forest lands.
Otl 1351–xx 1352–xx*	ner physical assets: Grants to State and local governments Direct Federal programs	Amounts for all other physical assets, such as conservation, reforestation and range improvements; grants to State or local governments for the purchase of land or structures; and amounts for certain privately-held assets, including improvements to private farms, land and structures acquired as collateral on defaulted loans, and sales of such land and structures. Does not include operation and maintenance of land and structures.
	Receipts from sales of other physical assets	Offsetting receipts collected from the sale of physical assets not used by the Federal Government. Includes sales of assets obtained by the Federal Government as collateral on defaulted loans.
14xx Conduct of research and development (R&D):		Research and development (R&D) activities comprise creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications. Include:
		 Administrative expenses for R&D. Exclude:
		 Physical assets for R&D such as R&D equipment and facilities (show on lines 13xx).
		 Routine product testing, quality control, mapping, collection of general-purpose statistics, experimental production, routine monitoring and evaluation of an operational program, and the training of scientific and technical personnel.
		Definitions of basic and applied research and development are provided below. You should be able to reconcile information reported in this schedule with information subsequently reported in the National Science Foundation Annual Survey of Federal Funds for Research and Development.
Basic research:		Basic research is defined as systematic study directed
1411-xx	Grants to State and local governments	toward fuller knowledge or understanding of the fundamental aspects of phenomena and of observable
1412-xx	Direct Federal programs	facts without specific applications towards processes or products in mind. Basic research, however, may include activities with broad applications in mind.
Applied research:		Applied research is defined as systematic study to gain
1421-xx	Grants to State and local governments	knowledge or understanding necessary to determine the means by which a recognized and specific need may be
1422-xx	Direct Federal programs	met.
Development:		Development is defined as systematic application of knowledge or understanding, directed toward the

	Entry	Description
1431–xx 1432–xx	Grants to State and local governments Direct Federal programs	production of useful materials, devices, and systems or methods, including design, development, and improvement of prototypes and new processes to meet specific requirements.
Memoran	dum (non-add) R&D entries:	
Conduct of (NSTC) cre	National Science and Technology Council osscuts:	
1463-xx	Climate change science programs, which incorporate the U.S. Global Change Research Program and the Climate Change Research Initiative (Report budget authority (1463–01), outlays 1463–02), and obligations (1463–04).)	 Observing and documenting global environmental changes and identifying their causes. Predicting the responses of the Earth system. Determining the ecological, human health, and socioeconomic consequences of these changes. Identifying strategies for adaptation and mitigation that will most benefit society and the environment. Additionally, near-term, results-oriented research focused on: Emerging science areas that offer prospect of significant improvement where additional resources would accelerate progress. Observations, monitoring and data management. Decision support tools for national, regional, and local discussions. P.L. 101–606 requires this program crosscut.
1464-01	Networking and information technology R&D (Report budget authority only.)	 OMB will work with the agencies to collect data on the following program component areas of networking and information technology R&D as required by P.L. 102–194: High-end computing infrastructure and applications to extend the state of the art in high-end computing systems, infrastructure supporting these systems, and advanced applications. High-end computing R&D to optimize the development and performance of future generations of high-end computing systems. Cyber security and information assurance to protect computer-based systems from actions that compromise or threaten to compromise the authentication, availability, integrity, or

	Entry	Description
		information they contain.
		 Human computer interaction and information management to expand human capabilities and knowledge through information use and management by computer systems and humans working with information technologies.
		• Large scale networking to extend the state of the art in networking architectures, technologies, services, security, and enhanced network performance.
		• Software design and productivity to advance software engineering concepts, methods, techniques, and tools that result in more usable, dependable, cost effective, and sustainable software intensive systems.
		• High confidence software and systems to advance science enabling the routine production of certifiably dependable, safe, secure complex computing and cyber-physical systems (IT-enabled engineered systems).
		• Social, economic, and workforce implications of IT and IT workforce development to advance the science of socio-technical systems, including understanding the co-evolution of IT and social and economic systems; develop the workforce of the 21st century; and develop innovative IT applications in education and training.
		P.L. 102–194 requires this program crosscut.
1465-01	National nanotechnology initiative (Report budget authority only.)	Research and development concerning the understanding and control of matter at dimensions between approximately 1 and 100 nanometers, where unique phenomena enable novel applications. Such research and development involves imaging, measuring, modeling, and manipulating matter at this length scale.
		OMB will work with the agencies to collect data on the following program component areas of nanotechnology R&D as required by P.L. 108–153:
		• Fundamental nanoscale phenomena and processes: Discovery and development of fundamental knowledge pertaining to new phenomena in the physical, biological, and engineering sciences that occur at the nanoscale. Elucidation of scientific and engineering principles related to nanoscale structures, processes, and mechanisms.
		 Nanomaterials: Research aimed at the discovery of novel nanoscale and

Entry Description

nanostructured materials and at a comprehensive understanding of the properties of nanomaterials (ranging across length scales, and including interface interactions). R&D leading to the ability to design and synthesize, in a controlled manner, nanostructured materials with targeted properties.

- Nanoscale devices and systems: R&D that applies the principles of nanoscale science and engineering to create novel, or to improve existing, devices and systems. Includes the incorporation of nanoscale or nanostructured materials to achieve improved performance or new functionality. To meet this definition, the enabling science and technology must be at the nanoscale, but the systems and devices themselves are not restricted to that size.
- Instrumentation research, metrology, and standards for nanotechnology: R&D pertaining to the tools needed to advance nanotechnology research and commercialization, including next-generation instrumentation for characterization, measurement, synthesis, and design of materials, structures, devices, and systems. Also includes R&D and other activities related to development of standards, including standards for nomenclature, materials, characterization and testing, and manufacture.
- Nanomanufacturing: R&D aimed at enabling scaled-up, reliable, and cost effective manufacturing of nanoscale materials, structures, devices, and systems. Includes R&D and integration of ultra-miniaturized topdown processes and increasingly complex bottom-up or self-assembly processes.
- Major research facilities and instrumentation acquisition: Establishment of user facilities, acquisition of major instrumentation, and other activities that develop, support, or enhance the Nation's scientific infrastructure for the conduct of nanoscale science, engineering, and technology research and development. Includes ongoing operation of user facilities and networks.
- Environmental, health, and safety: Research primarily directed at understanding the environmental, health, and safety impacts of nanotechnology development and corresponding risk assessment, risk management, and methods for risk mitigation.

Entry	Description
	• Education and societal dimensions: Education-related activities such as development of materials for schools, undergraduate programs, technical training, and public communication, including outreach and engagement. Research directed at identifying and quantifying the broad implications of nanotechnology for society, including social, economic, workforce, educational, ethical, and legal implications.

1466-xx Climate change technology programs Report budget authority (1466-01), outlays 1466-02), and obligations (1466-04).)

Activities focused on:

Approved research, development, and deployment activities classified as part of the Climate Change Technology Program (CCTP) must be activities that are relevant to providing opportunities for the following:

- Current and future reductions in or avoidances of emissions of greenhouse gases;
- Greenhouse gas capture and/or long-term storage, including biological uptake and storage;
- Conversion of greenhouse gases to beneficial use in ways that avoid emissions to the atmosphere;
- Monitoring and/or measurement of GHG emissions, inventories and fluxes in a variety of settings;
- Technologies that improve or displace other GHG emitting technologies, such that the result would be reduced GHG emissions compared to technologies they displace;
- Technologies that could enable or facilitate the development, deployment and use of other GHG-emissions reduction technologies;
- Technologies that alter, substitute for, or otherwise replace processes, materials, and/or feedstocks, resulting in lower net emission of GHGs;
- Technologies that mitigate the effects of climate change, enhance adaptation or resilience to climate change impacts, or potentially counterbalance the likelihood of human-induced climate change; and
- Basic research activities undertaken explicitly to address a technical barrier to progress of one of the above climate change technologies.

	Entry	Description
		 Greenhouse gas emission reductions resulting from clear improvements in management practices or purchasing decisions.
		P.L. 101-606 requires this program crosscut.
1467-xx	Climate change international assistance (Report budget authority (1467-01), outlays (1467-02), and obligations (1467-04).)	Activities focused on:
		 Support for the United Nations Framework Convention on Climate Change and the Intergovernmental Panel on Climate Change
		 Climate-related projects under the Global Environment Facility
		 Climate-related projects under the Tropical Forest Conservation Act.
		 International assistance activities under the Asia-Pacific Partnership on Clean Development and Climate.
		P.L. 101-606 requires this program crosscut.
15xx Co 1511–xx 1512–xx*	Onduct of education and training: Grants to State and local governments Direct Federal programs	Amounts for programs whose primary purpose is education, training, and vocational rehabilitation. Includes veterans' education and training; operating assistance for elementary, secondary, vocational, adult, and higher education; agricultural extension services; and income support activities directly contingent upon participating in such programs. Excludes training of military personnel or other persons in government service. Also excludes amounts for physical assets,
		which are classified in 13xx, and amounts for the conduct of research and development, which are classified in 14xx.
	Receipts from education and training	Offsetting receipts for negative subsidies, and downward reestimates of loan subsidies that are associated with the conduct of education and training.
2xxx N	ON-INVESTMENT ACTIVITIES	Amounts that are not classified as investment activities.
Grants to S	State and local governments:	Grant amounts that are not classified as investment
2001-xx	Other than shared revenues	activities.
2003-xx	Shared revenues	
2004–xx*	Direct Federal programs	Amounts for all other non-investment activities, including offsetting collections (see 84.3 (b) for exceptions). This is a residual balancing entry to ensure that the sum of all items in schedule C equals total budget authority and outlays net of offsetting collections. Includes transactions related to credit liquidating accounts.
	All other offsetting receipts	Offsetting receipts collected and deposited in receipt accounts that are not otherwise classified.

Summary of Character Classification Codes (Schedule C)

