ERDC/CERL TR-05-24

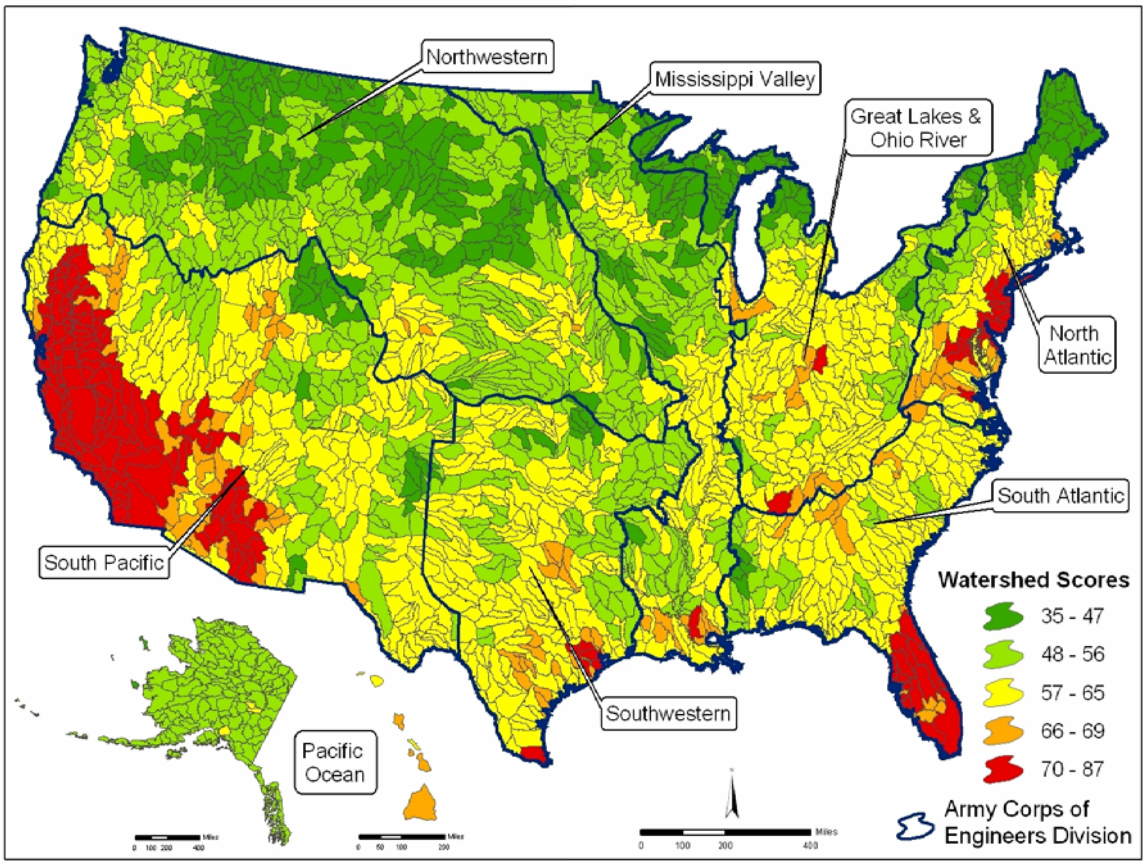
Construction Engineering Research Laboratory

US Army Corps of Engineers®
Engineer Research and Development Center

Watershed Application of the Sustainable Installations Regional Resource Assessment Tool

Elisabeth M. Jenicek, Donald F. Fournier, Natalie R. Downs, and Brad Boesdorfer

September 2005



ERDC/CERL TR-05-24
September 2005

Watershed Application of the Sustainable Installations Regional Resource Assessment Tool

Elisabeth M. Jenicek

Construction Engineering Research Laboratory
PO Box 9005
Champaign, IL 61826-9005

Donald F. Fournier

Building Research Council, University of Illinois at Urbana-Champaign

Natalie R. Downs

The PERTAN Group, Champaign, IL

Brad Boesdorfer

University of Illinois at Urbana-Champaign

Final Report

Prepared for U.S. Army Corps of Engineers
Washington, DC 20314-1000

Under Work Unit No. L74711, “FF Environmental Stewardship”

ABSTRACT: The U.S. Army Corps of Engineers recognizes the need for a system-wide approach to ecosystem management in its efforts to provide environmental sustainability in the stewardship of the Nation's water resources. As the Corps' increased activities in sustainable watershed and water resources management will require, there will be expanded use of new and existing tools. The System-Wide Water Resources Program (SWWRP) is designed to build and deliver these tools for effective system-wide applications. One major product of this program will be a Web-based decision support framework that will allow access to information, databases, numerical models, index models, habitat models, and socio-economic models. Characterization of the Nation's watersheds using an existing approach that has been applied to military installations will leverage existing research for a new application. This work characterized the nation's watersheds using a sub-set of indicators from Sustainable Installations Regional Resource Assessment (SIRRA), and developed a methodology to identify watersheds with potential sustainment problems, and to rank the watersheds by their relative vulnerability to such problems.

Contents

List of Figures and Tables

Figures

Tables

Conversion Factors

Non-SI* units of measurement used in this report can be converted to SI units as follows:

Multiply	By	To Obtain
acres	4,046.873	square meters
cubic feet	0.02831685	cubic meters
cubic inches	0.00001638706	cubic meters
degrees (angle)	0.01745329	radians
degrees Fahrenheit	(5/9) x (°F – 32)	degrees Celsius
degrees Fahrenheit	(5/9) x (°F – 32) + 273.15.	kelvins
feet	0.3048	meters
gallons (U.S. liquid)	0.003785412	cubic meters
horsepower (550 ft-lb force per second)	745.6999	watts
inches	0.0254	meters
kips per square foot	47.88026	kilopascals
kips per square inch	6.894757	megapascals
miles (U.S. statute)	1.609347	kilometers
pounds (force)	4.448222	newtons
pounds (force) per square inch	0.006894757	megapascals
pounds (mass)	0.4535924	kilograms
square feet	0.09290304	square meters
square miles	2,589,998	square meters
tons (force)	8,896.443	newtons
tons (2,000 pounds, mass)	907.1847	kilograms
yards	0.9144	meters

*_Système International d'Unités_ ("International System of Measurement"), commonly known as the "metric system."

Preface

This study was conducted for the Office of the Chief of Engineers (OCE), Headquarters, U.S. Army Corps of Engineers (HQUSACE) under projects "System-Wide Modeling," Work Units D7F2G3; "Regional Sediment Management," 008H09 and L74711, "FF Environmental Stewardship." The technical monitors were Michael Case, Fort Future Program Manager, and William Goran, Special Projects Officer, Construction Engineering Research Laboratory (CERL).

The work was performed by the Energy Branch (CF-E) and the Engineering Processes Branch (CF-N) of the CF Division, Construction Engineering Research Laboratory (CERL). The CERL Principal Investigator was Elisabeth M. Jenicek. Thomas J. Hartranft is Chief, CF-E, Donald K. Hicks is Chief, CF-N, and L. Michael Golish is Chief, CF. The associated Technical Directors are Michael Case and William Goran. Part of this work was done by Donald F. Fournier of the University of Illinois at Urbana-Champaign under contract number DACA88-99-D-002, Delivery Order 0031, and by Natalie R. Downs of the PERTAN Corporation under contract number W9132T-05-D-0001. Special appreciation is owed to Steve Ashby (ERDC Environmental Laboratory [EL]) and Jack Davis (ERDC Coastal and Hydraulics Laboratory [CHL]) for their technical review and input into the content of this document. The technical editor was William J. Wolfe, Information Technology Laboratory. Donald Hicks is Chief, CEERD-CF-N, Thomas Hartranft is Chief, CEERD-CF-N, and Michael Golish is Chief, CEERD-CF. The Acting Director of CERL is Dr. Ilker R. Adiguzel.

CERL is an element of the U.S. Army Engineer Research and Development Center (ERDC), U.S. Army Corps of Engineers. The Commander and Executive Director of ERDC is COL James R. Rowan, and the Director of ERDC is Dr. James R. Houston.

1 Introduction

Background

One of the key concerns for Department of Defense (DoD) installations is their ability to sustain, and sometimes change or expand, their mission activities. Optimal use of installations in the face of changing missions, closures, and realignments, requires an understanding of each installation's capabilities. Regional competition for land, transportation, energy, water, and other resources may put an installation's ability to perform essential activities at risk. It is critical to understand the factors that impact an installation's ability to maintain its mission.

Over the past several decades, the population and amount of developed land around most U.S. cities and military installations have grown significantly. Economic expansion driven by the presence of DoD installations spurs development of new suburban communities while services such as utilities and housing offered by cities attract population to urban areas. As a result, many installations now find themselves at the fringe (or in the midst) of large urbanized or urbanizing areas.

The U.S. Army Corps of Engineers recognizes the need for a system-wide approach to ecosystem management, restoration, and decisionmaking in its efforts to provide environmental sustainability in the stewardship of the Nation's water resources. Historically, tools and technologies available for water resources assessment have not been used extensively for large-scale and multiple project (system-wide) assessments. As the Corps increases its activities in sustainable watershed and water resources management, increased use of existing and new tools is anticipated. The System-Wide Water Resources Program (SWWRP) is designed to build and deliver these tools for effective system-wide applications.

One major product of this program will be a Web-based decision support framework. The framework will allow access to information, databases, numerical models, index models, habitat models, and socio-economic models. Coupled or linked models are also being developed for system-wide assessments. A tiered approach will allow use of various levels of models and tools based on scientific needs, user ability, and available resources. The framework will be flexible enough to allow individual applications of tools, information, and decisionmaking software or more complex applications involving coupled or linked models. Since applications will vary, the system

is being developed for "customization" as needed for different applications. Prototype applications are being developed in conjunction with District partners for field input to the product development. Characterization of the Nation's watersheds using an existing approach that has been applied to military installations will leverage existing research for a new application. Characterizing resources and stresses on a watershed basis will help to identify areas and watersheds most vulnerable to issues related to encroachment and development, and to determine those watersheds that would benefit from further study and intervention.

Objective

The objective of this work was to characterize the nation's watersheds using a subset of indicators from Sustainable Installations Regional Resource Assessment (SIRRA). Through the use of environmental research and sustainment indices, this work aims to develop a methodology to identify watersheds with potential sustainment problems, and to rank watersheds by their relative vulnerability to such problems.

Approach

This project initially characterized sustainment issues using a relevant subset of the indicators of the SIRRA tool. These assessments were then used as a screening tool to assess watersheds for which additional studies, planning, and actions may be recommended to ensure continued viability and sustainability.

Mode of Technology Transfer

This report will be made accessible through the World Wide Web (WWW) at URL:
http://www.cecer.army.mil

2 Sustainable Installations Regional Resource Assessment

Planners for Department of Defense (DOD) installations face increasingly complex challenges, due to rapid land use changes, stakeholder involvement in planning processes, and transforming Defense forces, technologies, and global circumstances. In response to these issues, the U.S. Army Corps of Engineers Engineer Research and Development Center, Construction Engineering Research Laboratory (ERDC-CERL) in Champaign, IL initiated several projects that are included in a project grouping entitled Sustainability, Encroachment, and Room to Maneuver (SERM). These research efforts are all designed to provide tools, data, expertise, and processes that help the DOD sustain and evolve mission operations, both military and civil works. The concept for SERM emerged from exploratory research initiated at CERL during the 1997-1998 timeframe. The purpose of SERM is to provide Defense planners with greater flexibility and ability to evaluate complex issues, and to access "the right information at the right time" to enhance their planning outcomes, while addressing current and future planning problems. SIRRA is one of the projects developed under SERM.

Regional resource assessment provides the opportunity to incorporate the broader perspective of regional issues into the concept of installation sustainability and its implications to mission sustainment. SIRRA is a process of characterizing installations based on a set of indicators grouped into several themes (Jenicek, Fournier et al. 2004). SIRRA uses uniform assessments with a broad set of indicators covering the range of issues that may affect military installations and their locality. The determined indicator(s) may be used to express the relative ranking of installations based on single measures (or groups of measures) that define a theme. This standardized approach enables the use of national level data to evaluate the regional aspects of the installation setting. This provides a heightened awareness of long-term issues that could threaten mission sustainment.

This methodology was first developed and presented in the ERDC/CERL TR-02-27, *An Assessment of Encroachment Mitigation Techniques for Army Lands,* * and further developed in the ERDC/CERL SR-02-12, *Sustainable Installation Risk Assessment and Stationing Implications.*† SIRRA version 1a was released in July 2004. Its capabilities are described in the ERDC/CERL TR-04-9, *The Sustainable Installations Regional Resource Assessment (SIRRA) Capability: Version 1.*‡

Regional Resource Assessment Framework and Metrics

Assessing installation or watershed sustainability is complex and requires the evaluation of a combination of indicators that are related to both exogenous and endogenous factors. These factors may not really lend themselves to prioritization, but present an indication of issues that may need to be addressed in installation or watershed planning and management. The effects of demographic change, community growth and sprawl, and regional economic vitality present levels of exogenous resource issues that may be a threat to continued mission sustainment or watershed vitality. Issues associated with installation mission, management, and cultural and natural histories define endogenous risk. The framework developed here looks outside the installation and is based on exogenous indicators that could be determined with data sets available nation-wide. Some indicators were deemed so critical that they were retained despite the lack of a national data set. Assessing levels of regional resource and environmental stress or demands entails developing a set of indicators or indices that can provide reliable information about the level and type of a given resource. The resource can vary from availability of clean water to the amount of vehicular traffic congestion in the region, the latter being an indicator of potential air pollution and water from non-point sources.

---

* Brian M. Deal, Donald F. Fournier, Diane M. Timlin, and Elisabeth M. Jenicek, [Technical Report] ERDC/CERL TR-02-27/ADA409139, *An Assessment of Encroachment Mitigation Techniques for Army Lands* (Engineer Research and Development Center, Construction Engineering Research Laboratory [ERDC-CERL], Champaign, IL, October 2002).

† Donald F. Fournier, Brian M. Deal, Elisabeth M. Jenicek, and Adam J. Sagert, [Special Report] ERDC/CERL SR-02-12/ADB284576, *Sustainable Installation Risk Assessment and Stationing Implications* (ERDC-CERL, September 2002).

‡ Elisabeth M. Jenicek, Donald F. Fournier, William D. Goran, Natalie R. Downs, and Adam J. Sagert, ERDC/CERL TR-04-9/ADA431769, *The Sustainable Installations Regional Resource Assessment (SIRRA) Capability: Version 1* (ERDC-CERL, July 2004).

Overview of Indicator Development

An "indicator" is a piece of information that reflects what is happening in a larger system. It allows observers to see the big picture by looking at a smaller part of it. Indicators are often quantitative measures such as physical or economic data. For example, traditional indicators such as inflation and unemployment rates are used for making economic decisions. Indicators are widely used as a tool for monitoring progress and to simplify, quantify, and communicate complex issues. Multiple indicators are sometimes aggregated into an index, usually for comparison across locations or to indicate change over time. Indicators are often used as the feedback mechanism to inform policy changes intended to improve the situation being measured. Their intent in the SERM analysis cycle is to provide the baseline information about the region in which the installation resides and illuminate key issues which may be a current or future threat to mission sustainment, mission realignments, or regional environmental health. These provide the starting point for regional planning and impact amelioration.

Because the process of measuring focuses attention on the impact, it makes a great deal of difference what is measured and how it relates to what we wish to measure. Developing indicators is a six-step process (Maclaren 1996):

- Define and conceptualize the goals for which indicators are needed.
- Identify the target audience, the associated purpose for which indicators will be used, and the relative number of indicators needed.
- Choose an appropriate indicator framework.
- Define indicator selection criteria.
- Identify a set of potential indicators and evaluate them against the selection criteria.
- Choose a final set of indicators and test their effectiveness.

As noted above, the goal of the indicators is to define and highlight regional issues that may define current or future encroachment and resource issues or potential future impacts. The encroachment and mission sustainment issue areas that have been defined by the Senior Readiness Oversight Council are:

- endangered species and critical habitat
- unexploded ordinance and munitions
- frequency encroachment
- maritime sustainability
- airspace restrictions
- air quality
- airborne noise
- urban growth.

Many of these issues are associated w/external aspects, what is located and what happens outside the fenceline. Incompatible residential and commercial development of land close to military installations can affect the ability of an installation to carry out its mission. Such development also threatens public safety because accidents sometimes occur in areas surrounding an installation. The economic health of a community is affected if military operations and missions must relocate because of urban encroachment.

The target audience for the indicators and the regional resource assessment are decisionmakers and planners who need broadly based information to inform their processes of determining future stationing, base realignments, and installation or watershed sustainability actions.

A framework for developing a set of indicators is necessary for every indicator effort. The choice of framework must meet users' needs and priorities. A number of frameworks have been identified and used. These frameworks provide a starting point for any organization embarking on a sustainability effort.

Virginia MacLaren (Maclaren 1996) reviews four general frameworks for use in organizing sustainability indicators: domain-based, goal-based, sectoral, or causal frameworks. She adds a fifth type, known as issue-based, and a combination framework, which uses two or more of the other frameworks.

A domain-based framework is based on the three key dimensions of sustainability: environment, economy, and society. Indicators are identified for each dimension. This framework is effective at ensuring that the key dimensions of sustainability are covered. A weakness of this framework is that indicators are not linked to sustainability goals. An example of the domain-based framework is the Sustainable Seattle effort.

A goal-based framework is predicted on the development of community sustainability goals. Indicators are then created for each goal. A benefit of this framework is that there are fewer indicators. A weakness is that it does not capture linkages among the dimensions of sustainability. Examples of goals are basic human needs, social well-being, economic prosperity, and carrying capacity. The United Kingdom's Local Government Management Board (LGMB) employed this kind of framework.

A sectoral framework may tie indicators to different sectors of a governing entity. This framework makes it easier to assign responsibilities for problems or results revealed by indicators. A drawback to using this framework is the resulting compartmentalization that often masks linkages between domains.

A causal framework is useful in explaining changes in indicators or whether policy interventions are effective. A drawback to this framework is that it implies simple linkages between stressors and conditions that may be very complex. This oversimplification can confuse the issues and lead to erroneous perceptions.

An issue-based framework may be popular because it addresses visible problems. A weakness of this framework is that it lacks explicit linkages to policy and presents a "shotgun" approach to developing indicators. Some examples of issues are urban sprawl, solid waste management, crime and safety, job creation, and industrial pollution.

The difficulty in selecting indicators is not a lack of measures, but rather the overwhelming number of potentially useful indicators. The International Institute for Sustainable Development selected the following criteria based on indicator literature and practical experience with performance measurement (IISD 2000):

- *Relevance*. Can the indicator be associated with one or several issues around which key policies are formulated? The indicator must be linked to critical decisions and policies.
- *Simplicity*. Can the information be presented in an easily understandable, appealing way to the target audience? Complex issues and calculations should yield clearly presentable and understandable information.
- *Validity*. Is the indicator a true reflection of the facts? Were the data collected using scientifically defensible measurement techniques? Is the indicator verifiable and reproducible? Methodological rigor is needed to make the data credible.
- *Temporality*. Are time-series data available, reflecting the trend of the indicator over time? Several data points are needed to visualize the direction the community or region may be going in the near future.
- *Measurability*. Are the data quantifiable—something that can be measured directly or can be counted? Data must be based on tangible information.
- *Availability and Affordability of Data*. Are good quality data available at a reasonable cost or is it feasible to initiate a monitoring process that will make it available in the future?
- *Expansiveness*. Is the indicator about a narrow or broad issue? Indicators that aggregate information on broader issues are preferred. For example, forest canopy temperature is a useful indicator of forest health and is preferable to other indicators to come to the same conclusion.
- *Sensitivity*. Can the indicator detect a small change in the system? Determine whether small or large changes are relevant for monitoring.
- *Reliability*, Will you arrive at the same result if you make two or more measurements of the same indicator? Others should reach the same conclusions based on the indicator.

SIRRA Indicator Framework

Under the SERM Program CERL has developed a SIRRA framework that addresses many aspects of installation sustainability from a regional perspective. Figure 1 shows the regional resource assessment framework of issues and indicators, including an example of the issue-indicator-data relationship. Each indicator measures a different dimension of potential risk or stress. Comparison across installations of values for an individual indicator can give a measure of relative stress along one dimension. Each issue has several indicators and sometimes a combination of several indicators, or indices.

Issue		
	Indicator	Data
	Indicator	Data
	Indicator	Data
Threatened and Endangered Species		
	# of TES in state	Fish and Wildlife Service
	Species at Risk	Jnl of Amer Wtr Resources Assoc
	Federally listed TES by Ecoregion	NatureServe
	TES of Concern	NatureServe

Figure 1. Regional resource assessment framework with example.

In additional to CERL's indicator development, the U.S. Army Environmental Center and the Center for Army Analysis are developing the Environmental Climate Model (ECM) (U.S. Army Environmental Center [USAEC] 2001). ECM is an indicator-based model used to assess demographic and environmental conditions in support of the Office of the Deputy Chief of Staff for Operations and Plans (DAMO-TR), Headquarters, Department of the Army, task to analyze the relative training value of a variety of active component Army installations. The umbrella effort is the Installation Training Capacity (ITC). The ITC is used to determine installations' relative capability of installations to support live training by Active and Reserve Component units stationed at, or habitually training on those installations as well as live training requirements of Service Schools on those installations. ITC focuses on land, ranges, training facilities, and demographic/ environmental factors affecting training. The study did not consider other installation capabilities such as cantonment area facilities, infrastructure, housing, etc.

The ECM is a process to identify and evaluate:

- environmental regulatory issues
- environmental issues that impact training

- encroachment issues that impact training
- impact of costs to maintain land for training
- environmental ability of the land to support and sustain training
- capability of the installation to expand or reconfigure to support training.

The ECM Methodology is a coordinated effort with USAEC and the major army commands and is continuing to be refined to ensure accuracy of information and pertinence of the criteria. ECM has been combined with CERL's exogenous indicator framework to develop a list of environmental factors to consider prior to stationing of forces (Tomich 2002). ITC and SERM complement one another and provide independent approaches to similar issues.

The research team has developed a set of regional resource assessment indicators based on the process, framework, and criteria considerations described above. To help determine installation sustainability, our indicators are a combination of issue-based and domain-based. Using a combination framework has the advantage of being able to draw on the strength of the two frameworks while downplaying their weaknesses (Maclaren 1996). This framework enables a relatively easy assessment of the potential resource issues in a region and highlights the issues within that region that an installation or watershed may be experiencing. The indicators show where the issues lie and highlight potential long-term sustainability implications.

Sustainability Issues

The selected issues are based on regional resource issues outside the installation boundaries and the associated indicators are determined using national data sources. Community growth increases the contiguity between outside development and the installation. This contiguity increases the likelihood of incompatibility of land use between military missions and nearby urban development resulting in conflicts. The issues have been generated to apply to military installations, but a subset of these issues and indicators would also apply to watersheds, political boundaries, energy grids, etc. Water and energy resources are impacted by regional growth and related consumption and contamination. Regional types of energy use and their sources affect energy security and availability. Based on the criteria and, the research team developed a set of nine sustainability issue areas with a total of forty-eight indicators. The sustainability issue areas are: Air, Energy, Urban Development, TES, Locational, Water, Economic, Quality of Life, and Infrastructure.

The SIRRA Set of Indicators

Indicators with the potential for measuring these regional resources within the nine issue areas were selected based on requirements:

- the availability at a uniform scale nation-wide to ensure consistency in comparisons.
- whether they were recorded for multiple time periods to enable the evaluation of change.
- whether they were prepared by a reputable source, such as a government agency or professional data vendor, and accompanied by metadata for quality assurance.
- whether they were provided in a digital format, to accelerate data gathering and preparation for analysis.
- their ability to be converted to GIS format.

The nine issues with their corresponding indicators represent a broad spectrum of issues related to resource availability and development. The 48 indicators provide a wide variety of information about population, economics, land development and usage, watershed quantity and health, natural disasters, infrastructure, air pollution, regional energy, and regional quality of life. Indicators come from a variety of sources such as the USGS for water resource information, the USEPA for air pollution data and water supply characterization, the U.S. Fish and Wildlife Service (USFWS) for endangered species data, the U.S. Census Bureau for population statistics, and the USDOE for energy related data. Appendix A includes the metadata documentation for each indicator, and provides the logic for indicator selection along with data sources, method of calculation, and assessment criteria. Since most of these are national data sets and were chosen due to the availability of national data, mapping provides a ready pictorial view of the sustainability issues. Table 1 lists the SIRRA indicators broken out by issue area, and also shows the data source and the data level. The highlighted cells in Table 1 designate the 23 indicators that were used in this study.

Table 1. Matrix of SIRRA indicators broken out by issue area.

	Indicator	Data Source	Data Level
		Issue Area: Air Sustainability	
AS1	Criteria Pollutant Non-Attainment*	Environmental Protection Agency (EPA)/ Energy Information Administration (EIA)	County
AS2	Noise Sensitivity	U.S. Census Bureau (USCB)	Installation
AS3	Air Space Demand	Federal Aviation Administration (FAA)	Installation
		Issue Area: Energy Sustainability	
EA1	Electrical Grid Congestion	North American Electric Reliability Council (NERC)	NERCSub
EA2	Electrical Reserve Margin	NERC	NERCReg
EA3	Renewable Energy - Wind	National Renewable Energy Laboratory (NREL)	Windgridunit
EA4	Renewable Energy - Solar	NREL	Solargridunit
EA5	Renewable Energy - Biomass	NREL	State
EA6	Electrical Price Structure (Dereg)	EIA	State
EA7	Net metering	Green Power network	State
		Issue Area: Urban Development	
UD1	Regional Population Density	USCB – 10 yrs	County
UD2	Incr. Regional Growth Rate	USCB – 10 yrs	County
UD3	Regional Population Growth	USCB – 10 yrs	County
UD4	Regional Land Urbanization	NLCD – 5 yrs	Installation
UD5	State Smart Growth Plans	American Planning Association (APA) web site	State
UD6	Joint Land Use Study (JLUS)	Department of Defense (DOD)	Installation
UD7	Proximity to MSA	USCB	Installation
		Issue Area: TES Sustainability	
TE1	# TES in State	USFWS	State
TE2	Species at Risk	Journal of American Water Resources Association (JAWRA)	watershed
TE3	Federally Listed TES by Ecoregion	NatureServe	Ecoregion
TE4	TES of Concern	NatureServe	Ecoregion
		Issue Area: Locational Sustainability	
LI1	Federally Declared Floods	Federal Emergency Management Agency (FEMA) database	County
LI2	Seismic Zones	U.S. Geological Survey (USGS) maps	Zone
LI3	Weather-Related Damage	National Weather Service (NWS)/National Oceanic and Atmospheric Administration (NOAA)	State
LI4	Federally Declared Disasters	FEMA database	County
LI5	Tornadoes	NOAA	County
		Issue Area: Water Sustainability	
WA1	Level of Development	JAWRA	Watershed
WA2	Ground Water Depletion	JAWRA	Watershed
WA3	Flood Risk	JAWRA	Watershed
WA4	Low Flow Sensitivity	JAWRA	Watershed
WA5	Water Quality	JAWRA	Watershed
		Issue Area: Economic Sustainability	
EP1	DoD Local Employment	U.S. Dept. of Commerce, Bureau of Economic Analysis (REIS) www.bea.gov	County
EP2	Job Availability/unemployment	Bureau of Labor Statistics	County
EP3	Housing Affordability	USCB	County
EP4	Poverty	USCB	County
		Issue Area: Quality of Life (QOL) Sustainability	
QL1	Crime Rate	National Archive of Criminal Justice Data (NACJD)	County
QL2	Housing Availability	USCB	County
QL3	Rental Availability	USCB	County
QL4	Healthcare Availability	HHS	County
QL5	Educational Attainment	USCB	County
QL6	Commute Times	USCB	County
		Issue Area: Infrastructure Sustainability	
TA1	Capacity of Comml Airports	Terminal Aerodrome Forecasts (TAF) System	Installation
TA2	Airport Suitability-C5	FAA	Installation
TA3	Airport Suitability-C141	FAA	Installation
TR1	Railroad Capacity	FRA	County
TR2	Proximity to Interstate	Intelligent Road/Rail Information Server (IRRIS)	Installation
TR3	Roadway Congestion	2002 Urban Mobility & Federal Highway Administration (FHWA)	State
TR4	Traffic Volume	Travel Time Index (TTI) & FHWA	State
*Shaded cells refer to the subset of indicators relevant to the characterization of watershed sustainability			

3 Methodology

Analysis Concept

SIRRA has proven to be a useful and successful sustainability screening tool and has been used in the past to assess installations in a decision support function (Fournier, Deal et al. 2002). SIRRA version 1a was released in July 2004 using National data sets organized in a web-based analysis tool (Jenicek, Fournier et al. 2004). The SIRRA methodology was reviewed by the individual DOD services before release. SIRRA data is derived from validated national sources, compiled in a consistent format, and covers a wide array of sustainability topics. SIRRA quantifies the state or condition of sustainability indicators and provides sustainability ratings for single indicators. However, it does not currently provide sustainability ratings based on an index—that is, a group of indicators—this is left to the user. To meet the objective to rank the general sustainability of all the Hydrologic Unit (HUC8) watersheds in the nation, the methodology of this report must generate a sustainability rating based on multiple indicators and be able to illustrate minor differences between watersheds and regions.

Currently, SIRRA sustainment ratings categorize indicator measures as sustainable, moderately sustainable, or unsustainable. Sustainment ratings were adjusted to have a finer resolution to highlight differences between a large number of watersheds within various regional settings. This study categorizes indicator measures in five categories:

1. Very low vulnerability
2. Low vulnerability
3. Moderate vulnerability
4. Vulnerable
5. High vulnerability.

The process of setting these thresholds is described in step 2 of section 3.2. Note that these ratings are not absolute in all cases as some are relative to a norm or mean.

Analysis Methodology

The analysis methodology consists of initially characterizing and weighting sustainment issues at HUC8 watersheds using the SIRRA system. A sub-set of 23 indicators was selected for this evaluation based on the impact of each indicator on watershed health. These indicators are highlighted in Table 1 and also listed in Appendix A.

The following steps were followed to accomplish this:

1. Compile data for 23 SIRRA indicators* for all the HUC8 watersheds in the nation.
2. Divide the 23 SIRRA Indicators into 5 categories of sustainability—where 1 represents very low vulnerability and 5 represents high vulnerability.
3. Sum the sustainability ratings to arrive at an overall sustainability score that characterizes a level of encroachment potential or sustainment jeopardy.

A more detailed description of each step follows.

4. Collect SIRRA indicator data for 2,250 HUC8 watersheds.
   Appendix A to this report includes the SIRRA metadata used in this analysis. Indicator data values were extracted directly from the SIRRA system available online at https://ff.cecer.army.mil/ff/sirra.do. The query results in several "not-available" data values—specifically for water sustainment indicators in Alaska and Hawaii where the data source does not report conditions in these areas. To ensure that these "not-available" data values neither hurt nor help watersheds, these values were either entered as "moderately sustainable," or the rating was interpolated from the surrounding nearby regions. Appendix B gives all data values for the SIRRA indicators by watershed used in the analysis.
   SIRRA does not currently report data for Regional Land Urbanization. This would be a significant indicator and in the future, it will be available once the 2001 National Land Coverage Data become available from the U.S. Geological Survey. Thus, this indicator was not used in sustainability rating calculations for this report.

5. Modify the vulnerability rating levels for indicator data to a finer level of characterization to better highlight differences between installations.

* A subset of the 48 SIRRA indicators relevant to watershed sustainability were used, as shown in **Table 1**.

The original SIRRA indicator sustainment ratings are based on extensive research. Sustainment ratings defined for this report use the SIRRA research to obtain a finer level of thresholds. The metadata in Appendix A includes the sustainment rating thresholds for the 23 SIRRA indicators used in this study.
Once sustainment ratings were determined, they were assigned numbers. This allows an indicator to be weighted and scored based on its criticality to watershed sustainment.

* very low vulnerability = 1
* low vulnerability = 2
* moderate vulnerability = 3
* vulnerable = 4
* high vulnerability = 5

6. Sum the individual indicator ratings for each watershed to arrive at an overall score.
   To arrive at a final sustainment/vulnerability score for the watershed, simply add the indicator values. The higher the score, the more vulnerable the watershed is considered or the more stress it incurs due to development and encroachment issues. The lower the score, the less vulnerable the watershed is to environmental and key issue stresses. Appendix B provides the indicator vulnerability score and final sustainment score for each watershed. The indicators are not weighted and each is treated equally. There could be some locational weighting applied for certain indicators, but this was not attempted for the current study.

Warning! Users are advised to review which indicators led to a high or low sustainability score and judge the score based on better local knowledge.

4 Results

Watershed Sustainability Scores

Figure 2 shows the resulting rankings of all 2,250 HUC8 sustainability scores. The sustainability scores for the watersheds ranged from 35 to 87. Vulnerability ratings were determined by subjecting the data to statistical analysis.

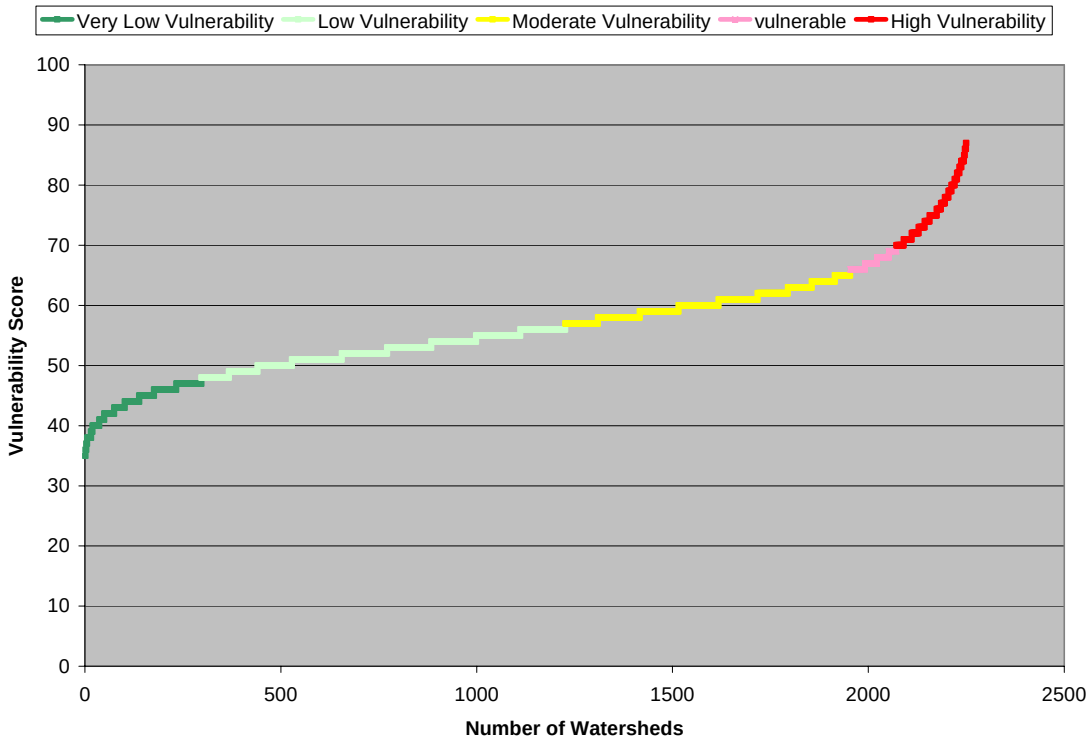


Figure 2. Watershed vulnerability scores.

Possible overall sustainability scores range from 23 to 115, where the lowest score represents the lowest potential vulnerability and the highest score represents the maximum potential vulnerability. Table 2 lists the range of scores and their statistics, and Table 3 lists the ranges for the various vulnerability classifications.

Table 2. Statistics of scores.

Statistical Analysis of Vulnerability Scores	
Median	56
Mean	56.51
Standard Deviation	8.61
Lowest Score	35
Highest Score	87

Table 3. Vulnerability ranges.

Ranges of Vulnerability Based on Statistics	
Very Low Vulnerability	Less that 1 Std Dev below Mean (< 47.9)
Low Vulnerability	Between 1 Std Dev below Mean and Mean (47.9 - 56.51)
Moderate Vulnerability	Between 1 Std Dev above Mean and Mean (56.51 – 65.12)
Vulnerable	Between 1 Std Dev above Mean and 1.5 Std Dev above Mean (65.12 – 69.42)
High Vulnerability	Above 1.5 Std Dev above Mean (> 69.42)

Discussion

Watersheds with the highest vulnerability tended to be in areas with high levels of urban development or agriculture or near large metropolitan areas. Regions showing the highest vulnerability were in California, Florida, or New Jersey along the New York City area. Watersheds in areas rated the least vulnerable tended to be located in rural areas or settings with low population. Figure 3 shows a map of the United States that consolidates the results.

All locations have some vulnerabilities to sustainability problems, as evidenced by the fact that the lowest rating score was still significantly higher than the lowest possible score. However, the highest scored watershed was still a good deal lower than the lowest possible score. This indicates that watersheds do vary and that not all of the indicators are low for any given location.

The range of scores was fairly linear across the range except for either extreme. The watersheds with the highest vulnerability have a fairly steep rise in scores, indicating that vulnerabilities were worsening as a group. The same is true for regions rated least vulnerable; the indicators tended to get much lower or better as a group.

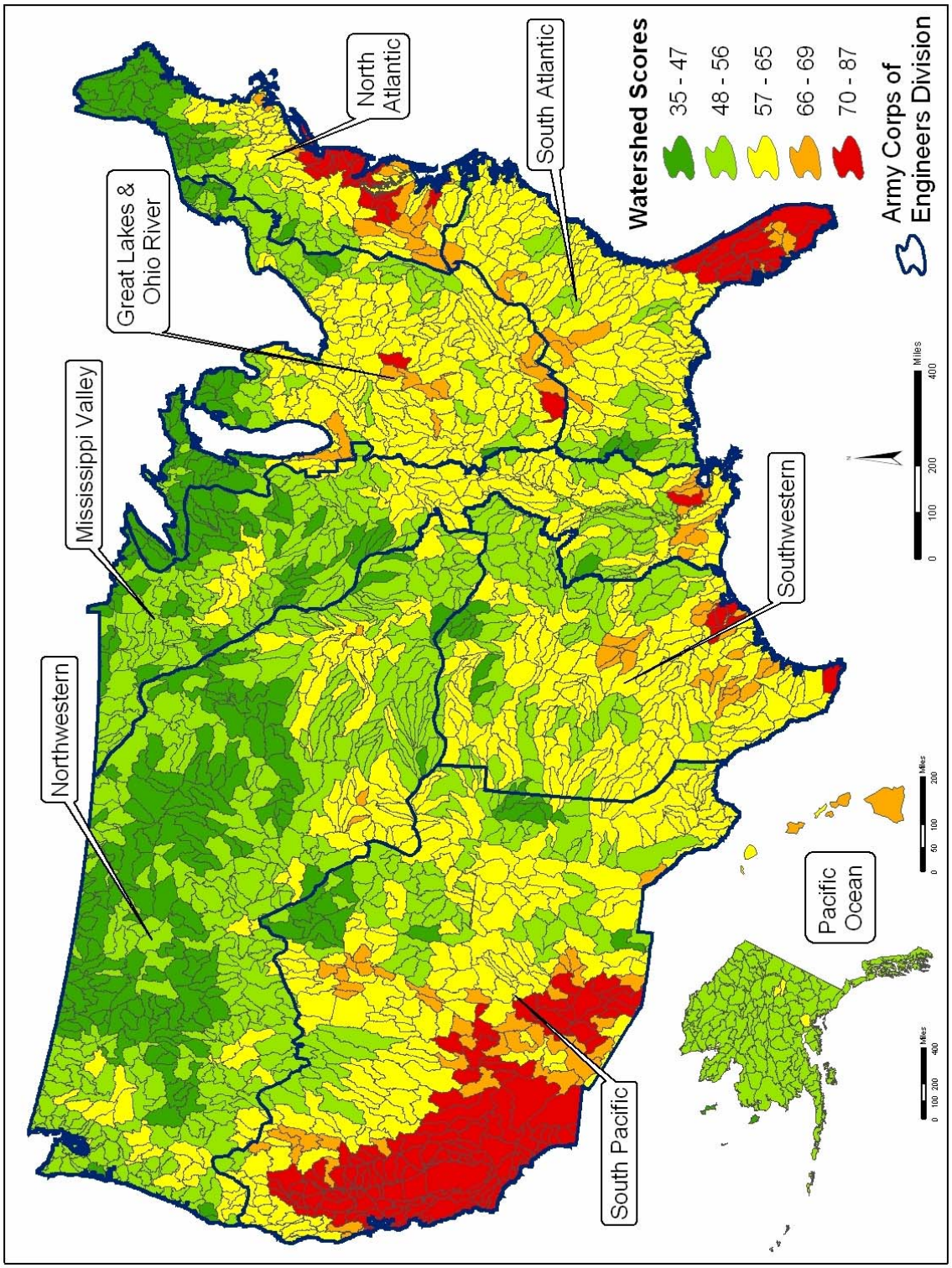


Figure 3. Map of watersheds with ratings. (Bounded areas indicate U.S. Army Corps of Engineers Divisions.)

5 Interpreting the Results

Scoring Implications

The vulnerability scores presented here represent a generic evaluation of the potential for environmental problems and general sustainability of any given watershed. The ranking methodology is meant to provide a screening tool—not a final, definitive evaluation of the sustainability of a watershed's location and region. The screened information requires further detailed studies specific to a watershed and its region. In other words, this methodology screens for certain issues and identifies watersheds considered to have potential problems *as determined by the chosen set of indicators*. A watershed may score high on an indictor that is state-wide in scope, yet the score could be wrong for that particular location or ecoregion.

The methodology of this report is based on national data sets and does not factor in unique or site specific conditions. As a national level screening tool, the information represents entire counties, states, or ecoregions, such that this data will not always agree with local data sources for specific watersheds or managed units within a county, watershed, or ecoregion. There are trade-offs between using this standardized approach, which allows the use of national-level data to evaluate regional aspects of the watershed, and using an approach that considers solely watershed specific data. The best recommendation is to examine the scores and judge for yourself which numbers are most important and what they mean. Any decision relevant to a specific watershed or location should always be informed by more than SIRRA. This report is a helpful screening tool that organizes these numerous sustainability data and provides relative characterizations of watersheds based on that information.

Understanding Options for Sustainment Mitigation

The characterization process results in a list of watersheds that may soon be experiencing or already experiencing negative impacts from development. Based on the characterization and any known sustainability issues for the watershed, a decision on how to proceed is required. Managing a watershed facing sustainability and environmental issues has essentially three courses of action. Note that each progressive step of action includes the previous step, so, if step 3 is recommended, so are the actions in steps 2:

1. Do nothing.
2. Engage in regional planning efforts.
3. Actively manage watershed and regional actions.

Option 1 is to maintain the status quo by doing nothing. This is the recommended action for those watersheds rated as having a very low vulnerability. Indicators illustrate that the region and the watershed are currently in fairly good harmony. However, this action includes a need to continue monitoring the watershed and updating the sustainment assessment as new information is made available. Temporal changes in indicators will provide a measure of how the situation is evolving, and will eventually identify when the "no action" course is no longer viable.

Option 2 involves long-term efforts in regional planning that rely on jurisdictions for enabling real change within the region. This is recommended for those watersheds with moderate vulnerability, which consequently may struggle with some sustainability issues. This option is valuable for building connections within the region and awakening local area responsibility for ecosystem sustainability. Consequently, for moderately vulnerable watersheds, it is recommended that managers collaborate with the local and state governments to ensure a viable future for both the watersheds and the local communities.

Option 3 focuses on actively working with the local governmental and non-governmental organizations to determine optimal land use actions within ecoregions and watersheds. It assumes the potential for short-term, concrete action to mitigate severe issues while the longer-term efforts are being negotiated. This option encourages mangers of vulnerable to highly vulnerable watersheds to actively work with the local governments and non-governmental organizations (NGOs) to find sustainable solutions. One should not assume that pursuing this option will de facto be beneficial; success depends on sufficient understanding of the issues and the availability of appropriate partners. It also depends on the ability to implement appropriate land use options (e.g., to identify suitable land for easement acquisition), and on the affordability of these options. Table 4 lists general guidelines for which overall option is best for a given watershed. However, the best sustainment mitigation strategy is often a combination of options.

Table 4. Vulnerability sustainment mitigation.

Vulnerability Score	Interpretation of Scores
35-56	Do nothing
57-65	Engage in regional planning
66-87	Actively manage watershed

6 Conclusions

The results of using the SIRRA methodology in a watershed context have provided a list of watersheds that require further analysis and evaluation. Of the 2,250 HUC8 watersheds in the Nation, the analysis indicates that 296 (about 13 percent) of the watersheds are vulnerable or highly vulnerable. Another 726 (one-third) of the watersheds were rated as moderately vulnerable. The remaining 1,228 (55 percent) of the watersheds were rated as having low or very low vulnerability. Areas of high growth and urbanization host the most endangered watersheds. Areas of Arizona, California, Florida, and the New Jersey/New York City region show the greatest vulnerability. This is not an unexpected result as these areas have experienced rapid growth and continue to experience development pressures.

This use of the SIRRA model demonstrates a prototype of how a Web-based decision support framework can be applied to watersheds. This approach used the SIRRA methodology, databases, and index models coupled with GIS for system-wide assessments. This report represents the first tier of a multi-tiered approach that allows use of various levels of models and tools based on scientific needs, user ability, and available resources. The framework is flexible to allow individual applications of the information to support decisionmaking.

This methodology will allow USACE Division and District planners and project managers, regulators, and operation and maintenance managers that are involved with system-wide studies such as watershed studies, ecosystem restoration, and water reallocation studies to obtain a first-cut evaluation of a watershed using national data sets.

This application of SIRRA provides the U.S Army Corps of Engineers with significant new capability in applying national data sets in a watershed context to form an assessment tool to address environmental mission needs at watershed scale. The SIRRA-based watershed analysis capability provides an information link that increases the effectiveness of partnering with other agencies and private stakeholders. The watershed-based screening tool may also reduce costs associated determining which watersheds need study and encourage sustainable management of our natural resources.

Acronyms and Abbreviations

Term	Spellout
AADT	Annual Average Daily Traffic per Lane
AEC	U.S. Army Environmental Center
AFB	Air Force Base
ANSI	American National Standards Institute
APA	American Planning Association
AVMT	annual vehicle miles traveled
CERL	Construction Engineering Research Laboratory
CO	carbon monoxide
DA	Department of the Army
DC	direct current
DO	Dissolved Oxygen
DOD	Department of Defense
DOI	Department of Interior
EIA	Energy Information Administration
EO	Executive Order
EPA	Environmental Protection Agency
ERDC	Engineer Research and Development Center
ES	Electrical System
ESRI	Environmental Systems Research Institute, Inc.
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FHA	Federal Housing Authority
FHWA	Federal Highway Administration
FY	fiscal year
GIS	geographic information system
HQ	headquarters
HQUSACE	Headquarters, U.S. Army Corps of Engineers
HUC	hydrologic unit code
ID	Identification
IRRIS	Intelligent Road/Rail Information Server
ITC	Installation Training Capacity
JAWRA	Journal of American Water Resources Association
JLUS	Joint Land Use Study
MSA	Metropolitan Statistical Areas
NAAQS	National Attainment Air Quality Standards
NACJD	National Archive of Criminal Justice Data
NAVFAC	Naval Facilities Engineering Command
NEMIS	National Emergency Management Information System

Term	Spellout
NERC	North American Electricity Reliability Council
NLCD	National Land Use Data
NOAA	National Oceanic and Atmospheric Administration
NREL	National Renewable Energy Laboratory
NWS	National Weather Service
OCE	Office of the Chief of Engineers
OMB	Office of Management and Budget
ORD	Operational Requirements Document
PDF	Portable Document Format
PM	particulate matter
PO	purchase order
QOL	Quality of Life
RCI	Roadway Congestion Index
RDTE	Research, Development, Test, and Evaluation
REIS	U.S. Department of Commerce, Bureau of Economic Analysis
SAR	Search and Rescue
SERM	Sustainability, Environment, and Room to Maneuver
SI	Systeme Internationale
SIRRA	Sustainable Installations Regional Resource Assessment
SR	Special Report
SWWRP	System-Wide Water Resources Program
TAF	Terminal Aerodrome Forecasts
TES	threatened and endangered species
TNC	The Nature Conservancy
TR	Technical Report
TTI	Travel Time Index
URL	Universal Resource Locator
USACE	U.S. Army Corps of Engineers
USAEC	U.S. Army Environmental Center
USC	United States Code
USCB	U.S. Census Bureau
USDOA	U.S. Department of Agriculture
USDOC	U.S. Department of Commerce
USDOE	U.S. Department of Energy
USDOI	U.S. Department of the Interior
USDOJ	U.S. Department of Justice
USDOL	U.S. Department of Labor
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
USESA	U.S. Endangered Species Act
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WWW	World Wide Web

Appendix A: SIRRA Metadata

Contents

Sustainability Issue: Air

Indicator: Criteria Pollutant Non-Attainment (AS1)

Variables: Six Principal Air Pollutants (also referred to as criteria pollutants): Nitrogen Dioxide (NO_2), Ozone (O_3), Sulfur Dioxide (SO_2), Particulate Matter (PM), Carbon Monoxide (CO), and Lead (Pb)

Scale: County

Year: 2003

Data Sources:

U.S. Environmental Protection Agency (USEPA), *Green Book Nonattainment Areas for Criteria Pollutants* (Nonattainment Status for Each County by Year) (USEPA, Office of Air and Radiation/Office of Air Quality Planning and Standards, Washington, DC, 2004), available through URL:

http://www.epa.gov/oar/oaqps/greenbk/anay.html.

USEPA, *Latest Findings on National Air Quality: 2002 Status and Trends (Summary Report)* (USEPA, Office of Air and Radiation/Office of Air Quality Planning and Standards, Washington, DC, 2003), available through URL:

http://www.epa.gov/ipbpages/current/v.6/454.htm.

Logic: The Clean Air Act provides the principal framework for national, state, tribal, and local efforts to protect air quality. Under the Clean Air Act, EPA establishes air quality standards to protect public health by setting National Attainment Air Quality Standards (NAAQS) for the six principal pollutants that are considered harmful to public health and the environment and ensuring that these air quality standards are met (in cooperation with the state, tribal, and local governments) through national standards and strategies to control air pollutant emissions from vehicles, factories, and other sources (USEPA, *Latest Findings on National Air Quality: 2002 Status and Trends [Summary Report]*, 2003). EPA has set national air quality standards for six principal air pollutants (also referred to as criteria pollutants): nitrogen dioxide (NO_2), ozone (O_3), sulfur dioxide (SO_2), particulate matter (PM), carbon monoxide (CO), and lead (Pb). Four of these pollutants (CO, Pb, NO_2, and SO_2) result primarily from direct emissions from a variety of sources. PM results from direct emissions, but is also commonly formed when emissions of nitrogen oxides (NOx), sulfur oxides (SOx), ammonia, organic compounds, and other gases react in the atmosphere. Ozone is not directly emitted, but is formed when NOx and volatile organic compounds (VOCs) react in the presence of sunlight (USEPA, *Latest Findings on National Air Quality: 2002 Status and Trends [Summary Report]*, 2003).

EPA tracks trends in air quality based on actual measurements of pollutant concentrations in the ambient (outside) air at monitoring sites across the country. State, tribal, and local government agencies as well as some Federal agencies, including the EPA, operate monitoring stations.

Air quality is important to military operations in non-attainment areas of EPA ambient air quality. The standards for the six criterion pollutants will have added restrictions on emissions from military operations. Gaining compliance for these regulations may cause financial strain on the DOD. Being located in a nonattainment zone is a strong indicator that the military may face restrictions on the amounts of certain emissions they can release (including mobility emissions) as part of the region's plan for coming into attainment. In summary, each criterion is vulnerable to change. Thus, the data should be updated regularly and the age of the data should be carefully noted in any analysis. Information concerning what affects each criterion is available from the EPA at URL:

http://www.epa.gov.

Additionally, the data reflects county level data where different values are reported for the same county in the same year in some cases. Thus, knowledge of the local area and its efforts need to be considered especially in large acreage counties.

Replicable: Each year EPA examines changes in levels of these ambient pollutants and their precursor emissions over time and summarizes the current air pollution status (USEPA, *Green Book Nonattainment Areas for Criteria Pollutants*, 2004). The updates are available for download at URL:

http://www.epa.gov/air/oaqps/greenbk/anay.html.

Directions: Download Nonattainment Status for Each County by Year for all U.S. counties from the EPA Green Book at URL:

http://www.epa.gov/air/oaqps/greenbk/anay.html

(USEPA, *Green Book Nonattainment Areas for Criteria Pollutants*, 2004). Import the Classification data into a GIS program and join it with the county shapefiles to create a GIS air quality attainment status indicator layer.

Indicator Measure: Emission status indicates whether or not a U.S. County is in attainment of EPA air quality emission standards for the six criteria pollutants. The EPA designates a 0-6 rating for each criteria depending on the non-attainment status (0 being no violation through 6 being extreme violations) (USEPA, *Green Book Nonattainment Areas for Criteria Pollutants*, 2004). It should be noted that different values are reported for the same county in the same year in some cases. In this case, the worst value is indicated, because of the fact that each criterion is subject to quick change. It is more likely that the rating changes to a lower value over time than a higher value due to the amount of local effort needed to increase a rating (USEPA, *Latest Findings on National Air Quality: 2002 Status and Trends* [Summary Report], 2003).

The emission ratings were grouped into the following classifications.

Very Low Vulnerability	(1):	No Violation (0) and Not Classified (0)
Low Vulnerability	(2):	Primary (1) and Section185 (1)
Moderate Vulnerability	(3):	Marginal (2) and Moderate Violations (3)
Vulnerable	(4):	Serious (4) and Severe (5)
High Vulnerability	(5):	Extreme Violations (6)

Rules: Installations are often in two or more counties. Therefore, the region around an installation is classified by a weighted average. The weighted average calculation determines what percentage of the installation is in each county and multiplies that percentage for each county by that county's classification value. The values for each county are then totaled to arrive at a value for region around the installation. This value is subjected to the same metric that determined the classification for the individual counties.

Example: Indicator Value for the Region Around Installation = (Percentage of Installation in County A* Indicator Value for County A) + (Percentage of Installation in County B* Indicator Value for County B) … etc.

Sustainability Issue: Urban Development

Indicator: Regional Population Density (UD1)

Variables: Population, Land Area (square mile)

Scale: County

Year: 2003

Data Source:

Bureau of the Census, U.S. Department of Commerce, *County Population Estimates and Estimated Components of Change, April 1, 2000 to July 1, 2003* (Population Estimates Program, Washington, DC, 2004), available through URL:

http://eire.census.gov/popest/estimates_dataset.php.

Bureau of the Census, U.S. Department of Commerce, "Summary File 1: GCT-PH1-R Population, Housing Units, Area, and Density," *American FactFinder* (Washington, DC, 2000), available through URL:

http://factfinder.census.gov

Craig, John, "Averaging Population Density," *Demography*, vol 21 No. 3 (1984), pp 405-412, available through URL:

http://www.jstor.org/

Logic: This indicator provides a measure of the population density of all counties in the United States. A high population density in the region surrounding an installation is a strong indicator of potential encroachment issues. This can affect the type and intensity of training that can take place on an installation.

Population density is a commonly quoted statistic. Almost no general descriptive summary of the population of an area is complete without a density listing, table, or map. As each such density statistic is an average, it is worth considering what kind of average is being used (J. Craig 1984). Additionally, it is important to note that this data is on the county level, not community or installation. Hence, it may be skewed by local "hotspots." In other words, if a county has one community with

relatively high regional population density, the entire county data is skewed by that density and may be classified as high regional population density regardless of the characteristics of the remaining majority of the county. Because of this concern, it is important to use local knowledge in interpreting the regional population density classifications.

Replicable: This indicator could be replicated every year based on Census population estimates, or every decade based on actual, verifiable counts.

Directions: Download county population from *County Population Estimates and Estimated Components of Change, April 1, 2000 to July 1, 2003* (U.S. Department of Commerce [USDOC], Bureau of the Census, 2004), available through URL:

http://eire.census.gov/popest/estimates_dataset.php

Download land area from Summary File 1: GCT-PH1-R *Population, Housing Units, Area, and Density* of the 2000 U.S. Census (USDOC, Bureau of the Census, 2000), available through URL:

http://factfinder.census.gov

The total population for each county in the United States was divided by the land area (not total area, which includes water bodies) in that county to reach a population density figure.

Regional Population Density = total population / land area

Import the resulting math into a GIS program and join it with the county shape files to create a GIS Regional Population Density indicator layer.

Indicator Measure: The average population density for the entire United States is 79.6 people per square mile according to the 2000 U.S. Census. The mean density for U.S. counties is 247 people per square mile. The results were then subjected to a normal statistical distribution (19%/62%/19%) to determine vulnerability classifications:

Very Low Vulnerability	(1):	<6 people per square mile
Low Vulnerability	(2):	>=6 – <12 people per square mile
Moderate Vulnerability	(3):	>=12 – <247 people per square mile
Vulnerable	(4):	>=247 – <2,000 people per square mile
High Vulnerability	(5):	>=2,000 people per square mile

Rules: Installations are often in two or more counties. Therefore, the region around an installation is classified by a weighted average. The weighted average calculation determines what percentage of the installation is in each county and multiplies that percentage for each county by that county's classification value. The values for each county are then totaled to arrive at a value for the region around the installation. This value is subjected to the same metric that determined the classification for the individual counties.

Example: Indicator Value for the Region Around Installation = (Percentage of Installation in County A* Indicator Value for County A) + (Percentage of Installation in County B* Indicator Value for County B) … etc.

Sustainability Issue: Urban Development

Indicator: Increasing Regional Growth Rate (UD2)

Variables: Total Population 1991, 1997, and 2003

Scale: County

Year: 2003

Data Source:

Bureau of the Census, U.S. Department of Commerce, *Intercensal State and County Characteristics Population Estimates with 1990-Base Race Groups* (Population Division, Washington, DC, 2004), available through URL:

http://eire.census.gov/popest/estimates_dataset.php

Bureau of the Census, U.S. Department of Commerce, *County Population Estimates and Estimated Components of Change, April 1, 2000 to July 1, 2003* (Population Estimates Program, Washington, DC, 2004), available through URL:

http://eire.census.gov/popest/estimates_dataset.php

Logic: An increasing regional growth rate is a strong indicator of increased population pressures in the future, leading to greater demands for services, access, resources, and land in competition with the military installation. This can affect the type and intensity of training that can take place on the installation.

Additionally, it is important to note this data is on the county level, not community or installation. Hence, it may be skewed by local "hotspots." In other words, if a

county has one community with relatively high regional growth rates, the entire county is classified as high regional growth regardless of the characteristics of the remaining majority of the county. Because of this concern, it is important to use local knowledge in interpreting the increasing regional growth rate classifications.

Replicable: This indicator could be replicated every year based on Census population estimates, or every decade based on actual, verifiable counts.

Directions: Download population for all U.S. counties for 1991 and 1997 from the *Intercensal State and County Characteristics Population Estimates with 1990-Base Race Groups* database maintained by the U.S. Census Bureau (USDOC, Bureau of the Census 2004). Sum total population per county. Download populations for all U.S. counties for 2003 from the *County Population Estimates and Estimated Components of Change, April 1, 2000 to July 1, 2003* database maintained by the U.S. Census Bureau (USDOC, Bureau of the Census, 2004). Given the total population for each county in the United States for 1991,1997, and 2003, the population growth rate from 1997 to 2003 is compared with the growth rate from 1991 to 1997. The increasing regional growth rate calculation used is as follows.

Increasing Regional Growth Rate = ([(Population 2003/Population 1997)/(Pop 1997/Pop 1991)]*100)

Import the resulting math into a GIS program and join it with the county shape files to create a GIS Increasing Regional Growth Rate indicator layer.

Indicator Measure: Increasing Regional Growth Rate is a measure of how fast a county is growing in the last decade compared with data from the previous decade. The population growth rate from 1997 to 2003 is compared with the growth rate from 1991 to 1997. This data is available from the U.S. Census at URL:

http://eire.census.gov/popest/estimates_dataset.php

(USDOC, Bureau of the Census, 2004). The data illustrates a U.S. average increasing growth rate of 98.9 percent and a county average increasing growth rate of 96.7 percent. Range classifications were based on expert opinion:

Very Low Vulnerability	(1):	<=95 percent increasing growth rate
Low Vulnerability	(2):	>95 – <=100 percent increasing growth rate
Moderate Vulnerability	(3):	>100 – <=105 percent increasing growth rate
Vulnerable	(4):	>105 – <=110 percent increasing growth rate
High Vulnerability	(5):	>110 percent increasing growth rate

Rules: Installations are often in two or more counties. Therefore, installation classifications are determined by a weighted average. The weighted average calculation determines what percentage of the installation is in each county and multiplies that percentage for each county by that county's classification value. Those values for each county of the installation are then totaled to arrive at a value for the region around an installation. This value is subjected to the same ranking metric that determined the classifications for the individual counties.

Example: Indicator Value for the Installation = (Percentage of Installation in County A* Indicator Value for County A) + (Percentage of Installation in County B* Indicator Value for County B) … etc.

Sustainability Issue: Urban Development

Indicator: Regional Population Growth (UD3)

Variables: Total Population 1993 and 2003

Scale: County

Year: 2003

Data Source:

Bureau of the Census, U.S. Department of Commerce, *Intercensal State and County Characteristics Population Estimates with 1990-Base Race Groups* (Population Division, Washington, DC, 2004), available through URL:

http://eire.census.gov/popest/estimates_dataset.php

Bureau of the Census, U.S. Department of Commerce, *County Population Estimates and Estimated Components of Change, April 1, 2000 to July 1, 2003* (Population Estimates Program. Washington, DC, 2004), available through URL:

http://eire.census.gov/popest/estimates_dataset.php

Logic: This indicator measures the population growth over the last decade of every county in the United States. Population growth is one of the leading causes of environmental degradation, because more people use more resources including water, energy, and waste disposal, and other problems. This indicator assumes that fast growing human populations are less sustainable.

The degree of regional population growth is a strong indicator of the demand for services, access, resources, and land in competition with the military installation. This can affect the type and intensity of training that can take place on the installation. This indicator was calculated based on population data from the U.S. Census Bureau.

Additionally, it is important to note this data is on the county level, not community or installation. Hence, it may be skewed by local "hotspots." In other words, if a county has one community with relatively high regional population growth, the entire county is classified as high regional population growth regardless of the characteristics of the remaining majority of the county. Because of this concern, it is important to use local knowledge in interpreting the regional population growth classifications.

Replicable: This indicator could be replicated every year based on Census population estimates, or every decade based on actual, verifiable counts.

Directions: Download population for all U.S. counties for 1993 from the Intercensal State and County Characteristics Population Estimates with 1990-Base Race Groups database maintained by the U.S. Census Bureau (USDOC, Bureau of the Census 2004). Sum total population per county. Download populations for all U.S. counties for 2003 from the County Population Estimates and Estimated Components of Change, 1 April 2000 to 1 July 2003 database maintained by the U.S. Census Bureau (USDOC, Bureau of the Census 2004). Given the total population for each county in the United States for1993 and 2003, the population growth rate from 1993 to 2003 was calculated as follows.

Regional Growth Rate = (Population 2003/Population 1993)*100

Import the resulting math into a GIS program and join it with the county shape files to create a GIS Regional Growth Rate indicator layer.

Indicator Measure: Regional Growth Rate is a measure of how fast a county has grown during the previous decade. The population growth rate is measured from 1993 to 2003. This data is available from the U.S. Census at URL:

http://eire.census.gov/popest/estimates_dataset.php

(USDOC, Bureau of the Census 2004). The data illustrates a U.S. growth rate of 11.9 percent and a county average growth rate of 8.7 percent. The results were statistically classified based on the mean and standard deviation values:

Very Low Vulnerability	(1):	<=0.85 percent Population Growth
Low Vulnerability	(2):	>0.85 – <=8.7 percent Population Growth
Moderate Vulnerability	(3):	>8.7 – <=24.5 percent Population Growth
Vulnerable	(4):	>24.5 – <=32.25 percent Population Growth
High Vulnerability	(5):	>32.25 percent Population Growth

Rules: Installations are often in two or more counties. Therefore, installation classifications are determined by a weighted average. The weighted average calculation determines what percentage of the installation is in each county and multiplies that percentage for each county by that county's classification value. Those values for each county of the installation are then totaled to arrive at a value for the region around an installation. This value is subjected to the same ranking that determined the ratings for the individual counties.

Example: Indicator Value for the Installation = (Percentage of Installation in County A* Indicator Value for County A) + (Percentage of Installation in County B* Indicator Value for County B) … etc.

Sustainability Issue: Urban Development

Indicator: State Smart Growth Plans (UD5)

Variables: Presence of State Smart Growth Plan

Scale: State

Year: 2002

Data Source:

American Planning Association (APA), *Planning for Smart Growth: 2002 State of the States* (Smart Growth Network, Chicago, IL, 2002), available through URL:

http://www.planning.org/growingsmart/states2002.htm.

Logic: This indicator shows the status of State Smart Growth Initiatives across the United States. Smart growth is the planning, design, development, and revitalization of cities, towns, suburbs, and rural areas to create and promote social equity, a sense of place and community, as well as to preserve natural and cultural resources. Smart growth enhances ecological integrity over both the short- and long-term, and improves quality of life for all by expanding—in a fiscally responsible

manner—the range of transportation, employment, and housing choices available to a region (APA 2002).

The presence of a state smart growth plan is important because smart growth legislation can reduce sprawl and decrease the growth of urbanized land surrounding a military installation. The potential encroachment caused by sprawl and urban development can affect the type and intensity of training that can take place on the installation.

Replicable: This indicator could be replicated regularly as long as the APA continues to monitor Smart Growth (which is likely considering that one of the main tenants of the APA currently is to get smart growth passed in every state). It is recommended that this indicator be updated annually.

Directions: APA constructed a map to chart the progress of smart growth reform. That map is available at URL:

http://www.planning.org/growingsmart/states2002.htm

and was synthesized to create the map and scale used for this indicator (APA 2002). Download the map data, import it into a GIS program, and join it with the state shape files to create a GIS State Smart Growth Plans indicator layer.

Indicator Measure: Substantial Reforms means that smart growth legislation has been passed in the state. Moderate reforms or pursuing additional reforms means that some form of land use laws resembling smart growth have been passed or legislation has been proposed. No reforms mean that no legislation has been passed or proposed (APA 2002):

Very Low Vulnerability	(1):	Substantial Reforms
Low Vulnerability	(2):	Not Applicable
Moderate Vulnerability	(3):	Moderate (or Pursuing Additional) Reforms
Vulnerable	(4):	Not Applicable
High Vulnerability	(5):	No Reforms

Rules: Every installation is located primarily in one state, although several installations do cross state boundaries. The region around an installation takes on the rating of the state in which the installation is primarily located.

Sustainability Issue: Urban Development

Indicator: Proximity to Metropolitan Statistical Areas (MSA) (UD7)

Variables: MSA, Mile Buffers

Scale: Installation

Year: 2003

Data Source:

Bureau of the Census, U.S. Department of Commerce, *About Metropolitan and Micropolitan Statistical Areas* (Office of Management and Budget, Washington, DC, 2003), available through URL:

http://www.census.gov/population/www/estimates/aboutmetro.html

Logic: This indicator shows the proximity of Military installations to MSA, which indicates the potential for encroachment on military facilities. MSAs are a geographic entity designated by the Federal Office of Management and Budget for use by Federal statistical agencies (USDOC, Bureau of the Census 2003). An MSA consists of one or more counties, except in New England, where MSAs are defined in terms of county subdivisions (primarily cities and towns) (USDOC, Bureau of the Census 2003). Encroachment is a strong indicator of pressures on the future use and vulnerability of military installations. Encroachment places the military installation in a vulnerable state, affecting the type and intensity of training that could take place on the installation due to greater demands and limitations on military developments.

Replicable: This indicator could be replicated every year based on Census population estimates or every decade based on actual, verifiable counts. It is recommended that the data be replicated only once a decade due to the inaccuracy of census estimates. The GIS compatible layer containing MSAs (USDOC, Bureau of the Census 2003) can be found at URL:

http://www.census.gov

Directions: Download the GIS layer containing MSAs from the U.S. Census Bureau (USDOC, Bureau of the Census 2003). Import the data into a GIS program to create a Proximity to MSA indicator layer. Create buffers at a predetermined distance from the edge of each MSA to show a level of risk.

Indicator Measure: Proximity to MSA is defined as the distance from the nearest MSA to an installation. All areas within an MSA were classified as highly vulnerable, while all areas not within an MSA, but within 20 miles of an MSA were classified as moderately vulnerable. All areas outside of the 20-mile buffer were

considered not vulnerable. Proximity to MSA classifications were defined as follows:

Very Low Vulnerability	(1):	Areas greater than 20 miles away from any MSA
Low Vulnerability	(2):	Not Applicable
Moderate Vulnerability	(3):	Areas not within an MSA, but within 20 miles of one or more MSAs
Vulnerable	(4):	Not Applicable
High Vulnerability	(5):	Within a Census designated MSA

Rules: This indicator measures an installations' proximity to an MSA. If only part of an installation is located within an MSA, then that region surrounding the installation takes on the highly vulnerable classification. The same follows if an installation straddles the 20 mile buffer—half of the installation within 20 miles the other half greater than 20 miles, the region takes on the "moderate" vulnerability classification.

Sustainability Indicator: Threatened and Endangered Species (TES)

Indicator: Number of TES per State (TE1)

Variables: Number of TES per square mile

Scale: State

Year: 2004

Data Source:

Bak, J.M., S. Sekscienski, and B. Woodson, SFIM-AEC-EQ-TR-20018, *FY 2000 Survey of Threatened and Endangered Species on Army Lands* (U.S. Army Environmental Center, Aberdeen Proving Ground, MD, U.S. Navy HQ NAVFAC, U.S. Air Force AFCEE, 2002), available through URL:

http://clients.emainc.com/navfac/

Sikes Act, 16 USC 670a-670o, 74 Stat, 1052 (1960), available through URL:

http://laws.fws.gov/lawsdigest/sikes.html

U.S. Department of Defense (DOD), U.S. Fish and Wildlife Service (USFWS), and U.S. Department of the Interior (USDOI), *Integrated Natural Resources Management Plans* (Washington, DC, 2002), available through URL:

http://endangered.fws.gov/DOD/inrmp.pdf

USFWS, and USDOI, *Threatened and Endangered Species System* (Species Information) (The Endangered Species Program, Washington, DC, 2004), available through URL:

http://endangered.fws.gov

Logic: This indicator gives an indication of the comparative number of TES in each state. The presence of TES is highly sought after as a sustainability indicator due to the possible limitations they may put on certain land use actions, military or otherwise, in time or in space. In addition, other Federal requirements (e.g., Sikes Act) may require consideration and protection of state listed or other identified species identical or comparable to that required by the Endangered Species Act ("Sikes Act," 1960; USDOI, USFWS 2003). Overall, the presence of TES on a military installation may result in legal and other requirements regarding the conservation and management of those species (DOD et al. 2002).

Replicable: This information could be replicated daily based on updates from the USFWS Endangered Species Program (2004). It can be anticipated that the individual state lists will increase over time and that the removal of species from state lists will be uncommon and infrequent. However, changes in numbers can be anticipated to be relatively small and replication every day, or even year, should not be universally necessary.

Directions: Download the number of TES in each state from the USFWS Endangered Species Program (2004).

Import the resulting data into a GIS program and join it with the state shape files to create a TES in states indicator layer.

Indicator Measure: The number of TES per state was divided by its respective state area (square miles) resulting in Number of TES per State per Square Mile. This distributes the data by area. Distributing the data by area allows for an equal comparison between large and small-area states. In other words, it protects against a large-area state from a more vulnerable classification because it naturally has more occurrences compared to a small-area state. The Number of TES per State per square mile were statistically classified by determining the mean standard deviation. Using this logic, the following classifications were defined:

Very Low Vulnerability	(1):	<=0.0005 species per square mile
Low Vulnerability	(2):	>0.0005 – <=0.0017 species per square mile
Moderate Vulnerability	(3):	>0.0017 – <=0.0028 species per square mile
Vulnerable	(4):	>0.0028 – <=0.0038 species per square mile
High Vulnerability	(5):	>0.0038 species per square mile

Rules: Every installation is located primarily in one state, although several installations do cross state boundaries. A region around an installation takes on the classification of the state in which the installation is primarily located.

Sustainability Issue: Threatened and Endangered Species (TES)

Indicator: Species at Risk (TE2)

Variable: Number of Species

Scale: Watershed

Year: 1997

Data Source:

USEPA, *The Index of Watershed Indicators*, EPA-841-R-97-010 (Office of Water, Washington, DC, 1997), available through URL:

http://www.epa.gov/wateratlas/geo/maplist.html

Hurd, B., N. Leary, R. Jones, and J. Smith, "Relative Regional Vulnerability of Water Resources to Climate Change," *Journal of the American Water Resources Association*, vol 35, No. 6 (1999), pp 1399-1409, available through URL:

http://www.awra.org

Sikes Act, 16 USC 670a-670o, 74 Stat. 1052 (1960), available through URL:

http://laws.fws.gov/lawsdigest/sikes.html

16 USC 670a-670o, 74 Stat. 1052, available through URL:

http://laws.fws.gov/lawsdigest/sikes.html

Logic: This indicator measures the number of threatened and endangered species known to be in a watershed based on Federal Threatened and Endangered species (TES) counts as given by the USEPA in 1997 (USEPA 1997). This indicator characterizes the degree of relative stress that a watershed may be currently experiencing from a variety of sources, including habitat loss, pollution, predation, and disease by counting the number of at-risk, water-dependant species within a watershed (B. Hurd et al. 1999).

According to the Sikes Act, the DOD and Department of Interior (DOI) must cooperate with local state agencies for the planning, management, and maintenance of

fish and wildlife populations and their associated habitat on military installations ("Sikes Act," 1960). Watersheds with a high number of TES will significantly increase the possibility of regulatory restrictions on the installation's mission. This would then place the military installation in a vulnerable state, possibly affecting the type and intensity of training that would take place on the installation. Reduction and or change in military training activities may result if state and Federal agencies question military training impacts on TES and associated habitat. Restrictions, reductions, and change of training could result, including the permanent removal of land parcels from training. (Supplementary applicable laws and regulations can be found at URL:

http://www.epa.gov/win/law.html

A watershed is the area of land where all of the water that is under it or drains off of it is routed to a specific waterway. Watersheds are delineated by USGS using a nationwide system based on surface hydrologic features. This system divides the country into 21 regions, 222 subregions, 352 accounting units, and 2,262 cataloguing units. A hierarchical hydrologic unit code (HUC) consisting of two digits for each level in the hydrologic unit system is used to identify any hydrologic area. The 6-digit accounting units and the 8-digit cataloguing units are generally referred to as basin and sub-basin. There are many states that have defined down to 16-digit HUCs (USEPA 1997).

Replicable: Efforts are being made to replicate this analysis so it can be updated when new EPA data is available using the methodologies generated by the original study. The EPA intends to replicate the effort and produce new data, although the timeline is unclear at this point due to lack of funding. This data is found in the EPA's Index of Water Quality Indicators (USEPA 1997), available through URL:

http://www.epa.gov/wateratlas/geo/maplist.html

Directions: Download "species at risk" from the EPA *Index of Watershed Indicators* (USEPA 1997). Import the data into a GIS program and join it with the watershed shapefiles to create a GIS Species at Risk indicator layer. The index is available through URL:

http://www.epa.gov/wateratlas/geo/maplist.html

Indicator Measure: Number of aquatic and wetland species identified were defined as either threatened or endangered, at-risk, or water-dependant, as estimated by EPA IWI (USEPA 1997). The species at risk ratings were grouped into the following classifications based on definitions assigned by the EPA (USEPA

1997) as well as expert opinion. A complete explanation of the EPA ranges is available through URL:

http://www.epa.gov/wateratlas/geo/maplist.html

Very Low Vulnerability	(1):	0 species at risk per square mile
Low Vulnerability	(2):	Not Applicable
Moderate Vulnerability	(3):	1 species at risk per square mile
Vulnerable	(4):	Not Applicable
High Vulnerability	(5):	2 or more species at risk per square mile

Rules: Every installation is located primarily in one watershed, although several installations do cross watershed boundaries. The area around an installation takes on the rating of the watershed where the installation is primarily located (area basis).

Sustainability Issue: Threatened and Endangered Species (TES)

Indicator: Federally Listed TES by Ecoregion (TE3)

Variables: Year-round presence/resident, Seasonal, Migratory, Contiguous, and Accidental per square mile

Scale: Ecoregion

Year: 2004

Data Source:

Sikes Act, 16 USC 670a-670o, 74 Stat. 1052 (1960), available through URL:

http://laws.fws.gov/lawsdigest/sikes.html

USDOD, USFWS, and USDOI, *Integrated Natural Resources Management Plans* (Washington, DC, 2002), available through URL:

http://endangered.fws.gov/DOD/inrmp.pdf

NatureServe Central Databases, *TNC [The Nature Conservancy] Ecoregion Threatened and Endangered Species* (Arlington, VA, 2004).

Logic: The species included in this analysis consist of all species with Federal status under the USESA for which NatureServe has associated Element Occurrence (EO) data. This indicator is important as a TES indicator because the presence of TES on or near a military installation may result in legal and other

ence of TES on or near a military installation may result in legal and other requirements regarding the conservation and management of those species (DOD et al. 2002). The presence of TES may limit certain land use actions, military or otherwise, in time or in space. In addition, other Federal requirements (e.g., Sikes Act) may require consideration and protection of state listed or other identified species identical or comparable to that required by the Endangered Species Act ("Sikes Act," 1960; USDOI, USFWS 2003). Reporting TES by ecoregions as opposed to States have certain advantages in naming species by habitat. In other words, classifying by state may result in the entire state classified as high TES vulnerability regardless of the characteristics of the majority of the state.

The following data is missing in the NatureServe Central Databases and the dataset used for this analysis.

- *Most Washington Animal Data.* With the exception of some select species, animal data in Washington is tracked by an agency outside the Washington Natural Heritage Program and the methodology of that animal location data is not currently compatible with Heritage EO Methodology.
- *Alaska Animal Data.* NatureServe is unable to provide Alaska animal data until they complete their next data exchange with their Heritage program in the coming year.
- *Massachusetts Data.* NatureServe has an incomplete EO dataset for Massachusetts that is also a couple of years old. While these records were included in the crosstab tallies, the numbers for Ecoregions that intersect with Massachusetts may be low.
- *Arizona Data.* NatureServe does not currently store the coordinates for Arizona species location data in their Central Database. The crosstab tallies for Ecoregions that intersect with Arizona do not include counts of species locations within the state of Arizona.

Replicable: Although this information could be replicated every year from the NatureServe Central Database, there would be relatively little reason to do so. TES presence, once identified, would not be expected to change unless the species was extirpated, or its status changed. If the species were extirpated, other political and social concerns and considerations would raise themselves.

Directions: Data was ordered from the NatureServe Central Database (NatureServe 2004). Since data comes with a fee, it is recommended that the data be reproduced no more often than annually. The data will arrive in a spreadsheet format. Import the data into a GIS program and join with the ecoregion shape files to create a TES by Ecoregion indicator layer.

Indicator Measure: The number of Federally listed TES per ecoregion was divided by its respective ecoregion area (square miles) resulting in Federally Listed TES by Ecoregion per Square Mile. This distributes the data by area. Distributing the data by area allows for an equal comparison between large and small-area ecoregions. In other words, it protects against a large-area ecoregion from a more vulnerable classification because it naturally has more occurrences compared to a small-area ecoregion. Federally Listed TES by Ecoregion per square mile were statistically classified:

Very Low Vulnerability	(1):	<=0.00016 species per square mile
Low Vulnerability	(2):	>0.00016 – <=0.00031 species per square mile
Moderate Vulnerability	(3):	>0.00031 – <=0.00086 species per square mile
Vulnerable	(4):	>0.00086 – <=0.0015 species per square mile
High Vulnerability	(5):	>0.0015 species per square mile

Rules: Every installation is located primarily in one ecoregion, although several installations do cross ecoregion boundaries. The area around an installation takes on the rating of the ecoregion where the installation is primarily located (area basis).

Sustainability Issue: Threatened and Endangered Species (TES)

Indicator: Species of Concern (TE4)

Variables: Species with a Global Conservation Status Rank of G1/T1 – G2/T2 and having no Federal Status per square mile

Scale: Ecoregion

Year: 2004

Data Source:

Sikes Act, 16 USC 670a-670o, 74 Stat. 1052 (1960), available through URL:

http://laws.fws.gov/lawsdigest/sikes.html

DOD, USFWS, and USDOI, *Integrated Natural Resources Management Plans* (Washington, DC, 2002), available through URL:

http://endangered.fws.gov/DOD/inrmp.pdf

NatureServe Central Databases, *TNC Ecoregion Species of Concern* (Arlington, VA, 2004).

Logic: The species included in this analysis consist of all species with a Global Conservation Status Rank of G1/T1 – G2/T2 and having no Federal status. In other words, the data only includes location records in the counts for which that status does NOT apply and those records do NOT have Federal protection. For example, if a species only has Federal status within 50 miles of a coastline, then only records for that species that are further then 50 miles from the coast would be included. This indicator is important as a TES indicator because the presence of TES on or near a military installation may result in legal and other requirements regarding the conservation and management of those species (DOD et al. 2002). The presence of TES may limit certain land use actions, military or otherwise, in time or in space. In addition, other Federal requirements (e.g., Sikes Act) may require consideration and protection of state listed or other identified species identical or comparable to that required by the Endangered Species Act ("Sikes Act," 1960; USDOI, USFWS 2003). Reporting TES by ecoregions as opposed to States have certain advantages in naming species by habitat. In other words, classifying by state may result in the entire state classified as high TES vulnerability regardless of the characteristics of the majority of the state.

The following data is missing in the NatureServe Central Databases and the dataset used for this analysis.

- *Most Washington Animal Data.* with the exception of some select species, animal data in Washington is tracked by an agency outside the Washington Natural Heritage Program and the methodology of that animal location data is not currently compatible with Heritage EO Methodology.
- *Alaska Animal Data.* NatureServe cannot provide Alaska animal data until they complete their next data exchange with their Heritage program in the coming year.
- *Massachusetts Data.* NatureServe has an incomplete EO dataset for Massachusetts that is also a couple of years old. While these records were included in the crosstab tallies, the numbers for Ecoregions that intersect with Massachusetts may be low.
- *Arizona Data.* NatureServe does not currently store the coordinates for Arizona species location data in their Central Database. The crosstab tallies for Ecoregions that intersect with Arizona do not include counts of species locations within the state of Arizona.

Replicable: Although this information could be replicated every year from the NatureServe Central Database, there would be relatively little reason to do so. TES presence, once identified, would not be expected to change unless the species was extirpated, or its status changed. If the species were extirpated, other political and social concerns and considerations would raise themselves.

Directions: Data was ordered from the NatureServe Central Database (NatureServe 2004). Since data comes with a fee, it is recommended that the data be reproduced no more often than annually. The data will arrive in a spreadsheet format. Import the data into a GIS program and join with the ecoregion shape files to create a Species of Concern indicator layer.

Indicator Measure: The number of species of concern per ecoregion was divided by its respective ecoregion area (square miles) resulting in Species of Concern by Ecoregion per Square Mile. This distributes the data by area. Distributing the data by area allows for an equal comparison between large and small-area ecoregions. In other words, it protects against a large-area ecoregion from a more vulnerable classification because it naturally has more occurrences compared to a small-area ecoregion. Species of Concern by Ecoregion per square mile were statistically classified using the standard deviation and the mean. Using this logic, the following classifications were defined:

Very Low Vulnerability (1): <=0.0006 species per square mile
Low Vulnerability (2): >0.0006 – <=0.00195 species per square mile
Moderate Vulnerability (3): >0.00195 – <=0.0033 species per square mile
Vulnerable (4): >0.0033 – <=0.00466 species per square mile
High Vulnerability (5): >0.00466 species per square mile

Rules: Every installation is located primarily in one ecoregion (though several installations do cross ecoregion boundaries). The area around an installation takes on the rating of the ecoregion where the installation is primarily located (area basis).

Sustainability Issue: Locational

Indicator: Federally Declared Floods (LI1)

Variable: Number of Federally declared floods per Square Mile

Scale: County

Year: 12/24/1964 through 6/15/2004, totaled

Data Sources:

Federal Emergency Management Agency (FEMA), U.S. Department of Homeland Security, *Federally Declared Disasters by Calendar Year* (FEMA GIS and Data Solutions Branch, Washington, DC, 2004), available through URL:

http://www.fema.gov/library/drcys.shtm

International Federation of Red Cross and Red Crescent Societies (IRRCRCS), *World Disasters Report: Focus on Reducing Risk 2002* (2002), available through URL:

http://www.ifrc.org/publicat/wdr2002/

Logic: Every year flood disasters cause damage amounting to billions of dollars world-wide. Floods inflict the greatest loss in money than any other Federally declared disaster in the United States. Floods are a threat to both built structures and human health and safety. Thus, the military must be sensitive to potential threats from the natural and built environment. The mission of the installation can be severely impacted by a flood if proper provisions are not in place.

This indicator measures the number of Federally Declared Floods occurring between 1964 and 2002. Federally Declared Floods are those floods declared by communities to the Federal government. Often times on declaration, the Federal government offers some form of relief to the community (IFRCRCS 2002). Thus whether or not a flood is declared depends largely on the resources of the community and the aggressiveness of community leaders. Many floods of significant consequences are not declared while some of relatively little consequences are declared. In other words, declaration may have little to do with severity. Nonetheless, Federally Declared Floods offer the best indication of a community's flood risk reduction efforts. It is simply vital to use local knowledge in interpreting the Federally Declared Floods classifications.

Replicable: This indicator can be updated annually based on Federally Declared Disasters by Calendar Year data, as collected in the National Emergency Management Information System (NEMIS) maintained by the Federal Emergency Management Agency (FEMA) (USDoHS, FEMA 2004).

Directions: The database, "Declarations by Type," is sorted by disaster type (USDoHS. FEMA 2004). All disasters except flooding are eliminated. Data is then sorted by county. Download and compile the data into a spreadsheet and calculate mean and standard deviation. Import the data into a GIS program and join it with the county shape files to create a Federally Declared Floods indicator layer.

Indicator Measure: The number of Federally declared floods for each county was summed to obtain a 38-year total for floods (USDoHS. FEMA 2004). This sum was then divided by its respective county area (square miles) resulting in Federally declared floods per square mile. This distributes the data by area. Distributing the data by area allows for an equal comparison between large and small-area counties. In other words, it protects against a large-area county from a more

vulnerable classification because it naturally has more occurrences compared to a small-area county. Statistical analysis resulted in a mean of 0.0058 floods per square mile and a standard deviation of 0.0259. Fitting the data to a normal distribution created the following classifications:

Very Low Vulnerability	(1):	<0.0059 floods per square mile
Low Vulnerability	(2):	>=0.0059 – <0.0189 floods per square mile
Moderate Vulnerability	(3):	>=0.0189 – <0.0317 floods per square mile
Vulnerable	(4):	>=0.0317 – <0.046 floods per square mile
High Vulnerability	(5):	>=0.046 floods per square mile

Rules: Installations are often in two or more counties. Therefore, regional classifications are determined by a weighted average. The weighted average calculation determines what percentage of the installation is in each county, and that percentage is multiplied by that county's value. The values for each county the installation lies in are then totaled to arrive at a value for the region. This value is then subject to the same metric that determined the classification for the individual counties.

Example: (Percent of Installation in County A* Indicator Value for County A) + (Percent of Installation in County B* Indicator Value for County B) … etc. = Indicator Value for the Region Around an Installation

Sustainability Issue: Locational

Indicator: Seismicity (LI2)

Variables: Spectral acceleration for 0.2 second period with 2 percent probability of exceedance in 50 years

Scale: National

Year: 2002

Data Sources:

Frankel, Arthur, Charles Mueller, Theodore Barnhard, David Perkins, E.V. Leyendecker, Nancy Dickman, Hanson, Margaret Stanley, & Hopper, *Seismic-Hazard Maps for the Conterminous United States*, U.S. Geological Survey Open-File Report 97-131-F (U.S. Geological Survey Bureau, USDOI, Reston, VA, 1997) (Map F - Horizontal spectral response acceleration for 0.2 second period (5% of critical damping) with 2% probability of exceedance in 50 years), available through URL:

http://geohazards.cr.usgs.gov/eq/

Personal communication with Steven Sweeney (Structural Engineer, ERDC-CERL), Champaign, IL and Adam Sagert (graduate student assistant associated with the project), 2002.

Logic: Earthquakes are a threat to built structures and human health and safety. The military must be sensitive to potential threats from the natural environment. The mission of the installation can be severely impacted by an earthquake.

Replicable: This indicator can be replicated as often as the USGS updates their Seismic Risk data. The trend seems to be to update these maps every 5 or 6 years.

Directions: Download the horizontal spectral response acceleration for 0.2 second period (5% of critical damping) with 2% probability of exceedance in 50 years. Import the data into a GIS program to create a seismicity risk area indicator layer. GIS data concerning seismicity (A. Frankel et al. 1997) is available at URL:

http://geohazards.cr.usgs.gov/eq/

Indicator Measure: The values found on the map are the horizontal spectral response acceleration for 0.2 second period (5% of critical damping) with 2% probability of exceedance in 50 years. USGS documentation (A. Frankel et al. 1997) separates the data into various seismic classifications, which were then translated into a vulnerability scale with the assistance of seismic expert and structural engineer, (personal communication with Sweeney 2002):

Very Low Vulnerability	(1):	<=7%g (gravity)
Low Vulnerability	(2):	>7 – <=8%g (gravity)
Moderate Vulnerability	(3):	>8 – <=16%g (gravity)
Vulnerable	(4):	>16 – <=24%g (gravity)
High Vulnerability	(5):	>24%g (gravity)

Rules: This indicator measures seismicity for a certain location. The region around an installation takes on the rating of the highest seismicity classification area that the installation touches. For instance, if an installation is partly in an moderate vulnerability classified area, and partly in a high vulnerability classified area, then the region around the installation has a high vulnerability classification.

Sustainability Issue: Locational

Indicator: Weather Related Damage (LI3)

Variable: Damage in dollars due to weather (crop and property) per square mile

Scale: State

Year: 1995-2003 data, totaled

Data Source:

National Oceanographic and Atmospheric Administration (NOAA), *Summary of Natural Hazard Statistics in the United States* (National Weather Service, U.S. Department of Commerce, Office of Climate, Water, and Weather Services, Silver Spring, MD, 2004), available through URL:

http://www.nws.noaa.gov/om/hazstats.shtml

Logic: The United States suffered nearly $200 billion in economic losses due to extreme weather in the 1990s, including $14 billion in damage in 1999 (USDOC, NOAA: NWS 2004). The insurance industry is worried about the soaring costs of severe weather damage and is already refusing to cover various weather events in certain regions. The DOD lost an installation with Hurricane Andrew's destruction of Homestead AFB in Florida in August 1992. By examining historical weather related damage trends, one can see the vulnerability of the military mission to extreme weather. Thus, the military must be sensitive to potential threats from the natural environment. Weather conditions are a threat to built structures, human health and safety, and the mission of the installation. This indicator provides a measurement of the cost of the loss of crops and damage due to natural disasters for the past seven years.

Replicable: This indicator could be updated annually as new data is posted to the National Weather Service website (USDOC, NOAA: NWS 2004).

Directions: From the NOAA website, select a year from the "State Summaries" pull-down menu (USDOC, NOAA: NWS 2004). This opens an Adobe acrobat document for that year containing fatalities, injuries, property damage, and crop damage for each state and U.S. territory. Download and compile the data into a spreadsheet and calculate mean and standard deviation. Import the data into a GIS program and join it with the county shape files to create a Weather Related Damage indicator layer.

Indicator Measure: The damage in dollars due to weather for each state and territory was summed to obtain a seven-year total for weather related crop and property damage (USDOC, NOAA: NWS 2004). This sum was then divided by its

respective state area (square miles) resulting in weather damage in dollars per square mile. This distributes the data by area. Distributing the data by area allows for an equal comparison between large and small-area states. In other words, it protects against a large-area state from a more vulnerable classification because it naturally has more occurrences compared to a small-area state. Statistical analysis resulted in a median of $33,817 per square mile and a standard deviation of $38,148. Fitting the data to a normal distribution created the following classifications:

Very Low Vulnerability	(1):	<$14,744
Low Vulnerability	(2):	>=$14,744 – <$33,818 per square mile
Moderate Vulnerability	(3):	>=$33,818 – <$52,892 per square mile
Vulnerable	(4):	>=$52,892 – <$71,967 per square mile
High Vulnerability	(5):	>=$71,967 per square mile

Rules: Every installation is located primarily in one state, although several installations do cross state boundaries. The region around an installation takes on the classification of the state in which the installation is primarily located.

Sustainability Issue: Locational

Indicator: Federally Declared Disasters (LI4)

Variables: Number of Federally declared natural disasters in the categories of tsunami, coastal storm, drought, earthquake, flood, freezing, hurricane, typhoon, dam/levee break, mud/landslide, severe ice storm, fire, snow, tornado, volcano, and severe storm per square mile

Scale: County

Year: 12/24/1964 through 6/15/2004, totaled

Data Source:

Federal Emergency Management Agency, U.S. Department of Homeland Security. (2004). Federally Declared Disasters by Calendar Year. FEMA GIS and Data Solutions Branch. Washington, DC, available through URL:

http://www.fema.gov/library/drcys.shtm

International Federation of Red Cross and Red Crescent Societies (IRRCRCS). (2002). World Disasters Report: Focus on Reducing Risk 2002, available through URL:

http://www.ifrc.org/publicat/wdr2002/

Logic: In the 1990s, some 2 billion people were affected by disasters world-wide (IFRCRCS 2002). No one is immune from disasters. Everyone is vulnerable, but some are more vulnerable than others. By examining historical disaster trends, one can see that it is not only weather related damage causing disasters. Flawed development patterns (e.g., rapid unplanned urbanization, deforestation, installation of non-flood-proof dykes, no early warning systems, etc.) are also exposing more people to disasters (IFRCRCS 2002). For example, earthquake fatalities are not necessarily the result of an earthquake, but rather ineffective building codes. Tornados sweeping away homes may not be a sign of strong winds as much as poorly sited housing. There is no doubt disasters are a threat to both built structures and human health and safety. Thus, the military must be sensitive to potential threats from the natural and built environment. The mission of the installation can be severely impacted by disasters if proper provisions are not in place.

This indicator measures the number of Federally Declared Disasters occurring between 1964 and 2002. Federally declared disasters are those disasters declared by communities to the Federal government. Often times on declaration, the Federal government offers some form of relief to the community (IFRCRCS 2002). Thus whether or not a disaster is declared depends largely on the resources of the community and the aggressiveness of community leaders. Many disasters of significant consequences are not declared while some of relatively little consequences are declared. In other words, declaration may have little to do with severity. Nonetheless, Federally declared disasters offer the best indication of a community's disaster vulnerability reduction efforts. It is simply vital to use local knowledge in interpreting the Federally Declared Disasters classifications.

Replicable: This indicator can be updated annually based on Federally Declared Disasters by Calendar Year data, as collected in the National Emergency Management Information System (NEMIS) maintained by the Federal Emergency Management Agency (FEMA) (USDoHS. FEMA 2004).

Directions: The database, "declarations by type," is sorted by disaster type (USDoHS. FEMA 2004). Those disasters that are not in the categories of tsunami, coastal storm, drought, earthquake, flood freezing, hurricane, typhoon, dam/levee break, mud/landslide, severe ice storm, fire, snow, tornado, volcano, or severe storm are eliminated. Data is then sorted by county. Download and compile the data into

a spreadsheet and calculate mean and standard deviation. Import the data into a GIS program and join it with the county shape files to create a Federally Declared Disasters indicator layer.

Indicator Measure: The number of Federally declared natural disasters in the categories of tsunami, coastal storm, drought, earthquake, flood, freezing, hurricane, typhoon, dam/levee break, mud/landslide, severe ice storm, fire, snow, tornado, volcano, and severe storm for each county was summed to obtain a 38-year total for natural disasters (USDoHS. FEMA 2004). This sum was then divided by its respective county area (square miles) resulting in Federally declared disasters per square mile. This distributes the data by area. Distributing the data by area allows for an equal comparison between large and small-area counties. In other words, it protects against a large-area county from a more vulnerable classification because it naturally has more occurrences compared to a small-area county. Statistical analysis resulted in a mean of 0.0239 disasters per square mile and a standard deviation of 0.1136. Fitting the data to a normal distribution created the following classifications:

Very Low Vulnerability	(1):	<0.0245 disasters per square mile
Low Vulnerability	(2):	>=0.0245 – <0.0183 disasters per square mile
Moderate Vulnerability	(3):	>=0.0183 – <0.1375 disasters per square mile
Vulnerable	(4):	>=0.1375 – <0.1945 disasters per square mile
High Vulnerability	(5):	>=0.1945 disasters per square mile

Rules: Installations are often in two or more counties. Therefore, regional classifications are determined by a weighted average. The weighted average calculation determines what percentage of the installation is in each county, and that percentage is multiplied by that county's value. Those values for each county around the installation are then totaled to arrive at a regional value. This value is then subject to the same metric that determined the classification for the individual counties.

Example: (Percent of Installation in County A* Indicator Value for County A) + (Percent of Installation in County B* Indicator Value for County B) … etc. = Indicator Value for the Region Around an Installation

Sustainability Issue: Locational

Indicator: Tornado Occurrences (LI5)

Variable: Tornado County-Segments per Square Mile

Scale: County

Year: 1992 - 2002

Data Source:

National Oceanic and Atmospheric Administration (NOAA), *Tornados* (U.S. Department of Commerce, Washington, DC, 2004), available through URL:

http://www.noaa.org/tornadoes.html

Logic: Tornadoes are one of nature's most violent storms. In an average year, about 1,000 tornadoes are reported across the United States, resulting in 80 deaths and over 1,500 injuries. A tornado is a violently rotating column of air extending from a thunderstorm to the ground. The most violent tornadoes are capable of tremendous destruction with wind speeds of 250 mph or more. Damage paths can be in excess of one mile wide and 50 miles long (NOAA 2004). Thus, the military must be sensitive to potential threats from tornadoes. Tornadoes, just as any other severe weather conditions, are a threat to built structures, human health and safety, and the mission of the installation.

This indicator measures the number and strength of tornadoes segments that passed through a county in a given year. It is not a measure of the number of total tornadoes by strength. If a tornado stays in one county, then a "tornado" is the same as a "segment." However, if a tornado that passes through two counties, it is then counted twice. If a tornado passes through three counties, it is then counted three times, and so forth. Tornadoes come in all shapes, sizes, and strengths and can occur anywhere in the U.S. at any time of the year. Yet, there are several geographic and climatic characteristics that may increase the probability of experiencing a tornado. For instance, in the southern states, peak tornado season is March through May, while peak months in the northern states are during the summer (NOAA 2004).

Tracking the occurrence and strength of tornadoes provides an indication of the likelihood of similar tornado damage re-occurring in the area. Yet there is an inherent inaccuracy in attempting to summarize expectations about what will happen in the future—weather forecasting. When predicting tornadoes, forecasters look for the development of temperature and wind flow patterns in the atmosphere that can cause enough moisture, instability, lift, and wind shear for tornadic thunderstorms. Those are the four needed ingredients. But it is not as easy as it sounds. "How much is enough" of those is not a hard fast number, but varies significantly from situation to situation—and is sometimes unknown. A large variety of weather patterns can lead to tornadoes; and often, similar patterns may produce no severe

weather at all. To further complicate it, the various computer models can have major biases and flaws when the forecaster tries to interpret them on the scale of thunderstorms. In other words, what may have caused several tornadoes 1 year may not result in any tornadoes the next year, or vice versa (NOAA 2004). The best anyone can do is to make an educated guess where the most favorable combination of ingredients tends to occur and classify the vulnerability.

Lastly, it is important to note this data is on the county level. Tornadoes typically only hit a relatively small portion of land, especially compared at the county level. Yet, to name that specific piece of land more than several hours in advance is impossible. Thus, it is often an area much greater than county borders that are highly vulnerable to tornado occurrences. In other words, if a neighboring county to the study county has a high occurrence of tornadoes, it may be wise to regard the study county as a higher potential county. Because of the inaccuracy of forecasting and large high-potential areas, it is important to use local knowledge in interpreting the tornado classifications.

Replicable: This indicator is updated annually by the NOAA Storm Prediction Center (NOAA 2004), available through URL:

http://www.spc.noaa.gov/software/svrplot2/

Directions: Query tornado occurrences for 2002 from the NOAA Storm Prediction Center's SeverePlot system available online at URL:

http://www.spc.noaa.gov/software/svrplot2/

Download the file in a tabular format and import it into a GIS program. The file should contain an "ID" for each tornado occurrence and a latitude/longitude for the beginning of the event and latitude/longitude for the end. Single touchdowns have the same beginning and ending latitude/longitude. Use the GIS software to form a polyline shapefile from the beginning to the end of the tornado's path. Finally, intersect the tornado paths with a county shapefile to note which counties the path crossed through, and use the GIS count function to get a number of tornadoes per county.

Indicator Measure: The number of tornado segments for each county was summed to obtain the total number of tornado segments occurring within a county from 1992 to 2002 (NOAA 2004). This sum was then divided by its respective county area (square miles) resulting in tornado segments per square mile. This distributes the data by area. Distributing the data by area allows for an equal comparison between large and small-area counties. In other words, it protects against a large-area county from a more vulnerable classification because it naturally has

more occurrences compared to a small-area county. Statistical analysis resulted in a mean of 0.0072 tornadoes per square mile and a standard deviation of 0.0112. Fitting the data to a normal distribution created the following classifications:

Very Low Vulnerability	(1):	<0.0027 tornadoes per square mile
Low Vulnerability	(2):	>=0.0027 – <0.0083 tornadoes per square mile
Moderate Vulnerability	(3):	>=0.0083 – <0.0139 tornadoes per square mile
Vulnerable	(4):	>=0.0139 – <0.0195 tornadoes per square mile
High Vulnerability	(5):	>=0.0195 tornadoes per square mile

Rules: Installations are often in two or more counties. Therefore, regional classifications are determined by a weighted average. The weighted average calculation determines what percentage of the installation is in each county, and that percentage is multiplied by that county's value. The values for each county around the installation are then totaled to arrive at a regional value. This value is then subject to the same metric that determined the classification for the individual counties.

Example: Indicator Value for the Region around an Installation = (Percentage of Installation in County A* Indicator Value for County A) + (Percentage of Installation in County B* Indicator Value for County B) … etc.

Sustainability Issue: Water

Indicator: Level of Development (WA1)

Variables: Level of Development, Stream flow levels

Scale: Watershed

Year: 1990

Data Source:

USEPA, *The Index of Watershed Indicators*, EPA-841-R-97-010 (Office of Water, Washington, DC, 1997), available through URL:

http://www.epa.gov/wateratlas/geo/maplist.html

Hurd, B., N. Leary, R. Jones, and J. Smith, "Relative Regional Vulnerability of Water Resources to Climate Change," *Journal of the American Water Resources Association*, vol 35, No. 6 (1999), pp 1399-1409, available through URL:

http://www.awra.org

Logic: This indicator measures the ratio of current water withdrawal to mean annual unregulated streamflow. Watersheds with low water availability and high demand are vulnerable, i.e., in areas of development intensive use of off-stream water generally occurs resulting in decreased water availability (B. Hurd et al. 1999). With a reduction in streamflow, either via seasonal or dramatic climatic change, an increase in both in-stream and off-stream uses will occur, especially in areas of high development and high irrigation (B. Hurd et al. 1999). This indicator has an impact on the military mission if and when an installation is in an area with vulnerable watersheds. Water availability could be compromised resulting in a negative impact on soldiers, training, carrying capacity and threatened and endangered species.

A watershed is the area of land where all of the water that is under it or drains off of it is routed to a specific waterway. Watersheds are delineated by USGS using a nationwide system based on surface hydrologic features. This system divides the country into 21 regions, 222 subregions, 352 accounting units, and 2,262 cataloguing units. A hierarchical hydrologic unit code (HUC) consisting of two digits for each level in the hydrologic unit system is used to identify any hydrologic area. The 6-digit accounting units and the 8-digit cataloguing units are generally referred to as basin and sub-basin. There are many states that have defined down to 16-digit HUCs (USEPA 1997).

Replicable: Efforts are being made to replicate this analysis so it can be updated when new EPA data is available using the methodologies generated by the original study. This data is found in the EPA's Index of Water Quality Indicators (USEPA 1997) at URL:

http://www.epa.gov/wateratlas/geo/maplist.html

The EPA intends to replicate the effort and produce new data, although the timeline is unclear at this point due to lack of funding.

Directions: Download "level of development" and "stream flow levels" from the EPA *Index of Watershed Indicators* (USEPA 1997) at URL:

http://www.epa.gov/wateratlas/geo/maplist.html

Import the data into a GIS program and join it with the watershed shapefiles to create a GIS Level of Development indicator layer.

Indicator Measure: Ranges were defined as the ratio of total annual surface and groundwater withdrawals in 1990 (QW) to unregulated mean annual streamflow (QS).

Level of Development = (QW /QS)

The level of development ratings were grouped into the following classifications based on definitions created by the EPA. A complete explanation of the EPA ranges (USEPA 1997) is available at URL:

http://www.epa.gov/wateratlas/geo/maplist.html

Very Low Vulnerability	(1):	Low Level of Development (Defined by EPA as less than 20 percent)
Low Vulnerability	(2):	Not Applicable
Moderate Vulnerability	(3):	Average Level of Development (Defined by EPA as 20 to 85 percent)
Vulnerable	(4):	Not Applicable
High Vulnerability	(5):	High Level of Development (Defined by EPA as greater than 85 percent)

Rules: Every installation is located primarily in one watershed, although several installations do cross watershed boundaries. The area around an installation takes on the rating of the watershed where the installation is primarily located (area basis).

Sustainability Issue: Water

Indicator: Groundwater Depletion (WA2)

Variables: Groundwater Outflow, Groundwater Withdrawals (annual)

Scale: Watershed

Year: 1990

Data Source:

USEPA, *The Index of Watershed Indicators*, EPA-841-R-97-010 (Office of Water, Washington, DC, 1997), available through URL:

http://www.epa.gov/wateratlas/geo/maplist.html

Hurd, B., N. Leary, R. Jones, and J. Smith, "Relative Regional Vulnerability of Water Resources to Climate Change," *Journal of the American Water Resources Association*, vol 35, No. 6 (1999), pp 1399-1409, available through URL:

http://www.awra.org

Logic: This indicator shows the level of groundwater withdrawal in the large watersheds of the continental United States. Groundwater depletion characterizes the extent to which rates of groundwater withdrawals are exceeding long-run average recharge rates, resulting in overdraft and a condition referred to as "groundwater mining" (B. Hurd et al. 1999). Average groundwater withdrawals in excess of natural baseflows indicate an unsustainable rate of groundwater use. Excessive groundwater withdrawals suggest that increased groundwater use may not be a viable adaptation to changes in surface water supply or increases in water demand (B. Hurd et al. 1999).

A watershed is the area of land where all of the water that is under it or drains off of it is routed to a specific waterway. Watersheds are delineated by USGS using a nationwide system based on surface hydrologic features. This system divides the country into 21 regions, 222 subregions, 352 accounting units, and 2,262 cataloguing units. A hierarchical hydrologic unit code (HUC) consisting of two digits for each level in the hydrologic unit system is used to identify any hydrologic area. The 6-digit accounting units and the 8-digit cataloguing units are generally referred to as basin and sub-basin. There are many states that have defined down to 16-digit HUCs (USEPA 1997).

Replicable: Efforts are being made to replicate this analysis so it can be updated when new EPA data is available using the methodologies generated by the original study. This data is found in the EPA's Index of Water Quality Indicators (USEPA 1997) at URL:

http://www.epa.gov/wateratlas/geo/maplist.html

The EPA intends to replicate the effort and produce new data, although the timeline is unclear at this point due to lack of funding.

Directions: Download "groundwater outflow" and " annual groundwater withdrawals" from the EPA *Index of Watershed Indicators* (USEPA 1997) at URL:

http://www.epa.gov/wateratlas/geo/maplist.html

Import the data into a GIS program and join it with the watershed shapefiles to create a GIS Ground Water Depletion indicator layer.

Indicator Measure: Ranges were defined as the ratio of average groundwater withdrawals (QGW) in 1990 to annual average baseflow (QBase), reflecting the extent that groundwater use rates may be exceeding recharge.

Ground Water Depletion = (QGW / QBase)

The groundwater depletion ratings were grouped into the following classifications based on definitions created by the EPA. A complete explanation of the EPA ranges (USEPA 1997) is available at URL:

http://www.epa.gov/wateratlas/geo/maplist.html

Very Low Vulnerability	(1):	Low Ground Water Depletion (defined by EPA as less than 8 percent)
Low Vulnerability	(2):	Not Applicable
Moderate Vulnerability	(3):	Average Ground Water Depletion (defined by EPA as 8 to 25 percent)
Vulnerable	(4):	Not Applicable
High Vulnerability	(5):	High Ground Water Depletion (defined by EPA as greater than 25 percent)

Rules: Every installation is located primarily in one watershed, although several installations do cross watershed boundaries. The area around an installation takes on the rating of the watershed where the installation is primarily located (area basis).

Sustainability Issue: Water

Indicator: Flood Risk (WA3)

Variable: Population

Scale: Watershed

Year: 1990

Data Source:

USEPA, *The Index of Watershed Indicators*, EPA-841-R-97-010 (Office of Water, Washington, DC, 1997), available through URL:

http://www.epa.gov/wateratlas/geo/maplist.html

Hurd, B., Leary, N., R. Jones, and J. Smith, "Relative Regional Vulnerability of Water Resources to Climate Change," *Journal of the American Water Resources Association*, vol 35, No. 6 1999), pp 1399-1409, available through URL:

http://www.awra.org

Logic: This indicator is based on the current population living within a 500-Year flood plain. The flood risk indicator characterizes the extent to which lives

and property are at risk of flood damages. The 500-Year Floodplain was selected over the more commonly used 100-Year standard because most, if not all, zoning standards and building practices have been based on the 100-Year standard (B. Hurd et al. 1999). This means that those living within the 100-Year Flood plain have generally taken the necessary precautions to mitigate flood risks. There is more concern and risk for populations and property that lie just beyond the margin of the 100-Year Floodplain, where people have not had regulations that have required modifications to properties to mitigate flood risks generally (B. Hurd et al., 1999). This takes into consideration the pressures on the future of negative impacts on water quality and availability. Training mission and carrying capacity would be negatively impacted as a result of a 500-Year flood. This would then place the military installation in a vulnerable state, possibly affecting the type and intensity of training that would take place on the installation. Applicable laws and regulations can be found at URL:

http://www.epa.gov/win/law.html

Replicable: This indicator will be replaced by the analysis of an installation's proximity to the 100 and 500-Year Floodplain once that data is released in its entirety by FEMA.

Directions: Download "flood risk" from the EPA *Index of Watershed Indicators* (USEPA 1997) at URL:

http://www.epa.gov/wateratlas/geo/maplist.html

Import the data into a GIS program and join it with the watershed shapefiles to create a GIS Flood Risk indicator layer.

Indicator Measure: Ranges were defined as estimated number of people within the 500-year floodplain. The flood vulnerability was grouped into the following classifications based on definitions created by the EPA. A complete explanation of the EPA ranges (USEPA 1997) is available at URL:

http://www.epa.gov/wateratlas/geo/maplist.html

Very Low Vulnerability	(1):	Low Flood Vulnerability (defined by EPA as less than 20,000 people)
Low Vulnerability	(2):	Not Applicable
Moderate Vulnerability	(3):	Average Flood Vulnerability (defined by EPA as 20,000 to 200,000 people)
Vulnerable	(4):	Not Applicable
High Vulnerability	(5):	High Flood Vulnerability (defined by EPA as greater than 200,000 people

Rules: Every installation is located primarily in one watershed, although several installations do cross watershed boundaries. The area around an installation takes on the rating of the watershed where the installation is primarily located (area basis).

Sustainability Issue: Water

Indicator: Low Flow Sensitivity (WA4)

Variables: Baseflow in ft3/second/square mile

Scale: Watershed

Year: 1990

Data Source:

USEPA, *The Index of Watershed Indicators*, EPA-841-R-97-010 (Office of Water, Washington, DC, 1997), available through URL:

http://www.epa.gov/wateratlas/geo/maplist.html

Hurd, B., Leary, N., R. Jones, and J. Smith, "Relative Regional Vulnerability of Water Resources to Climate Change," *Journal of the American Water Resources Association*, vol 35, No. 6 1999), pp 1399-1409, available through URL:

http://www.awra.org

Logic: This indicator measures the unregulated mean baseflow per unit area (cfs/square mile). Streamflows are critical to many riparian areas, and falling below safe threshold levels can threaten individual species or potentially endanger entire aquatic ecosystems. Riparian ecosystems where seasonal periods of extreme low flow occur are the most vulnerable to climatic and hydrologic changes. This further diminishes streamflows during the low flow seasons, since there is less capacity for enduring additional stresses (B. Hurd et al. 1999).

Impacts to the military mission would include diminished or stressed threatened and endangered species (TES) habitat and population, which in turn could negatively impact the ability for certain training and other missions. Diminished carrying capacity across training may result due to the increased erosion, as a result. Finally, the availability of water would significantly decrease resulting in resource vulnerability.

A watershed is the area of land where all of the water that is under it or drains off of it is routed to a specific waterway. Watersheds are delineated by USGS using a nationwide system based on surface hydrologic features. This system divides the country into 21 regions, 222 subregions, 352 accounting units, and 2,262 cataloguing units. A hierarchical hydrologic unit code (HUC) consisting of two digits for each level in the hydrologic unit system is used to identify any hydrologic area. The 6-digit accounting units and the 8-digit cataloguing units are generally referred to as basin and sub-basin. There are many states that have defined down to 16-digit HUCs (USEPA 1997).

Replicable: Efforts are being made to replicate this analysis so it can be updated when new EPA data is available using the methodologies generated by the original study. This data is found in the EPA's *Index of Water Quality Indicators* (USEPA 1997). at URL:

http://www.epa.gov/wateratlas/geo/maplist.html

The EPA intends to replicate the effort and produce new data, although the timeline is unclear at this point due to lack of funding.

Directions: Download "low flow sensitivity" from the EPA *Index of Watershed Indicators* (USEPA 1997) at URL:

http://www.epa.gov/wateratlas/geo/maplist.html

Import the data into a GIS program and join it with the watershed shapefiles to create a GIS Low Flow Sensitivity indicator layer.

Indicator Measure: Baseflow was defined as the mean value of streamflow that originates from groundwater outflow (baseflow) during a typical year. This measurement is mostly independent of levels and changes in surface runoff. The low flow sensitivity ratings were grouped into the following classifications based on definitions created by the EPA (USEPA 1997). A complete explanation of the EPA ranges is available at URL:

http://www.epa.gov/wateratlas/geo/maplist.html

Very Low Vulnerability	(1):	High Baseflow (defined by EPA as baseflow greater than 0.236 cfs per square mile)
Low Vulnerability	(2):	Not Applicable
Moderate Vulnerability	(3):	Average Baseflow (defined by EPA as baseflow greater than or equal to 0.065 cfs per square mile and Less than or equal to 0.236 cfs per square mile)
Vulnerable	(4):	Not Applicable
High Vulnerability	(5):	Low Baseflow (defined by EPA as baseflow less than

0.065 cfs per square mile)

Rules: Every installation is located primarily in one watershed, although several installations do cross watershed boundaries. The area around an installation takes on the rating of the watershed where the installation is primarily located (area basis).

Sustainability Issue: Water

Indicator: Water Quality Index (WA5)

Variables: Waters meeting designated uses, Source water condition for drinking water systems, Fish & wildlife consumption advisories, Indicators of source water condition, Contaminated sediments, Ambient water quality – toxics, Water quality – conventional, Wetlands loss, Aquatic and wetlands species at risk, Loads over limits – toxics, over limits – conventional, Urban runoff potential, Agriculture runoff potential, Population change, Hydrologic modification caused by dams, Estuarine pollution susceptibility, Deposition

Scale: Watershed

Year: 1999

Data Source:

USEPA, *The Index of Watershed Indicators*, EPA-841-R-97-010 (Office of Water, Washington, DC, 1997), available through URL:

http://www.epa.gov/wateratlas/geo/maplist.html

USEPA, *EPA Overall Watershed Characterization: September 1999 IWI Release* (Office of Water, Washington, DC, 1999), available through URL:

http://www.epa.gov/iwi/1999sept/catalog.html

Logic: The Index of Watershed Indicators (IWI) characterizes the condition and vulnerability of aquatic systems in each of the 2,262 watersheds in the 50 states and Puerto Rico (USEPA 1999). This involves an assessment of condition, vulnerability, and data sufficiency. All variables taken into consideration are strong indicators of pressures in the future on water quality and vulnerability, leading to greater demands and risks to water supplies (USEPA 1999). This would then place the military installation in a vulnerable state, possibly affecting the type and intensity of training that would take place on the installation. (Supplementary

intensity of training that would take place on the installation. (Supplementary applicable laws and regulations, available through URL:

http://www.epa.gov/win/law.html.

A watershed is the area of land where all of the water that is under it or drains off of it is routed to a specific waterway. Watersheds are delineated by USGS using a nationwide system based on surface hydrologic features. This system divides the country into 21 regions, 222 subregions, 352 accounting units, and 2,262 cataloguing units. A hierarchical hydrologic unit code (HUC) consisting of two digits for each level in the hydrologic unit system is used to identify any hydrologic area. The 6-digit accounting units and the 8-digit cataloguing units are generally referred to as basin and sub-basin. There are many states that have defined down to 16-digit HUCs (USEPA 1997).

Replicable: This indicator could be replicated every 2-4 years based on Regional inputs and monitoring programs. The Index of Watershed Indicators results are based on monitoring programs established within EPA Regions; monitoring programs vary across the country (USEPA 1999). Areas with strong monitoring programs may show more problems than those with weaker programs and replicability of these indicators depends heavily on current and future monitoring programs.

Directions: Download "water quality" from the EPA *Overall Watershed Characterization: September 1999 IWI Release* (USEPA 1999), available through URL:

http://www.epa.gov/iwi/1999sept/catalog.html

Import the data into a GIS program and join it with the watershed shapefiles to create a GIS Water Quality indicator layer.

Indicator Measure: This map combines 17 disparate data layers as listed above; layers were weighted and then combined by the EPA. The approach taken by the EPA (USEPA 1999) can be found at

http://oaspub.epa.gov/eims/direntrpt.report?p_deid=9996&p_chk=9186

Indicators of the condition of the watershed were scored and assigned to one of three categories: better water quality, water quality with less serious problems, and water quality with more serious problems (USEPA 1999). It is important to note that the strength of monitoring programs varies across the country and is reflected in the map. Areas with strong monitoring programs may show more problems than

those with weaker programs. The water quality IWI ratings were defined as follows by the EPA (USEPA 1999):

Very Low Vulnerability	(1):	Better Water Quality
Low Vulnerability	(2):	Not Applicable
Moderate Vulnerability	(3):	Less Serious Water Quality Problems
Vulnerable	(4):	Not Applicable
High Vulnerability	(5):	More Serious Water Quality Problems

Rules: Every installation is located primarily in one watershed, although several installations do cross watershed boundaries. The area around an installation takes on the rating of the watershed where the installation is primarily located (area basis).

Sustainability Issue: Infrastructure

Indicator: Proximity to Interstate (TR2)

Variables: Interstate Highways, Mile Buffers

Scale: Installation

Year: 2003

Data Sources:

No Data Sources (ESRI, GIS Data Layers, available through URL:

http://www.esri.com

Logic: This indicator provides a measurement of the distance from the nearest interstate highway to an installation. The proximity of an interstate to an installation is an indicator of availability of full transportation access. The interstate system is often required by the military for material shipment and mobilization. Lack of interstate access would place the military installation in a vulnerable state, affecting the type and intensity of training that could take place on the installation.

Replicable: This indicator could be replicated every year based on updated interstate highway maps as new construction occurs.

Directions: Obtain and open an interstates shapefiles either from ESRI or your own GIS database system. Create "buffers" around these interstates at pre-determined distances to develop a Proximity to Interstate indicator layer.

Indicator Measure: Proximity to interstates is defined as the distance from the nearest interstate highway to an installation. All areas within 20 miles of an interstate were considered to be well served (very low vulnerability), while all areas more than 20 miles, but less than 50 miles from an interstate were considered to be moderately served (moderate vulnerability). All areas outside of these buffers are considered underserved (high vulnerability). Proximity to Interstate classifications are defined as follows:

Very Low Vulnerability	(1):	Within 20 miles of an interstate
Low Vulnerability	(2):	Not Applicable
Moderate Vulnerability	(3):	Within 50 miles, but greater than 20 miles from an interstate
Vulnerable	(4):	Not Applicable
High Vulnerability	(5):	Underserved areas, Greater than 50 miles from an interstate

Rules: This indicator rates the region around an installation by evaluating its proximity to interstate highways. The region around an installation takes on the "highest" classification depending on its proximity to an interstate. For instance, if an installation straddles the 20 mile buffer—half of the installation within 20 miles the other half greater than 20 miles, the region resource takes on the "higher" classification.

Sustainability Issue: Infrastructure

Indicator: Roadway Congestion (TR3)

Variables: Roadway Congestion Index (RCI)

Scale: State

Year: 2002

Data Sources:

Chen, Ciao, Zhanfeng Jia, and Pravin Varaiya, *Causes and Cures of Highway Congestion* (University of California at Berkeley, Berkeley, CA, 2001), available through URL:

http://paleale.eecs.berkeley.edu/~varaiya/papers_ps.dir/csmpaperv3.pdf

Federal Highway Administration, U.S. Department of Transportation, *Highway Statistics 2002* (Office of Highway Policy Information, Washington, DC, 2004) (Table PS-1, Selected Measures for Identifying Peer States; Table VM-2, Functional System Travel Annual Vehicle-Miles; Table HM-60, Functional System Lane-Length Lane-Miles, Pima Association of Governments. (2004). Roadway Congestion. Tucson, Arizona), available through URL:

http://www.fhwa.dot.gov/policy/ohim/hs02/ps1.htm

http://www.fhwa.dot.gov/policy/ohim/hs02/vm2.htm

http://www.fhwa.dot.gov/policy/ohim/hs02/hm60.htm

http://www.pagnet.org/TPD/rsp/default.htm

Texas Transportation Institute (TTI), *2003 Urban Mobility Study* (Methodology - Base UMS Calculations) (Texas A&M University, College Station, TX, 2004), available through URL:

http://mobility.tamu.edu/ums/report/methodology_appB.pdf

TTI, *The Keys to Estimating Mobility* (Chapter 5: Recommended Mobility Measures) (Texas A&M University, College Station, TX, 2003), available through URL:

http://mobility.tamu.edu/ums/estimating_mobility/chapter5.pdf

Logic: This indicator provides a measurement of the congestion of the local road network surrounding a military installation. Road congestion is an indicator of potential problems using highway system near the installation. This addresses traffic from the military operations standpoint. Congestion problems would place the military installation in a vulnerable state, affecting the type and intensity of training that could take place on the installation. For instance, commute times for work related travel for the local community surrounding and including the installation would be extended longer than normally expected as a result of congestion problems (TTI 2003). Heavy to severe congestion areas also impacts the quality of life for the local community (see Commute Times as a Quality of Life sustainability indicator). Highways and roads within the proximity of a large MSA provide higher risks of congested travel and increasing potentials for vehicular accidents (C. Chen et al. 2001).

Additionally, it is important to note this data is on the state level, not community or installation. Hence, it may be skewed by local "hotspots." In other words, if a state has one roadway with relatively high congestion rates, the entire state may be classified as high roadway congestion regardless of the characteristics of the remaining majority of the state. Because of this concern, it is important to use local knowledge in interpreting the roadway congestion classifications. Since congestion is more associated with urban development and sprawl, the proximate to MSA indicator may be considered in conjunction with this indicator to give a better picture of the overall situation.

Replicable: This indicator could be replicated every year based on information updated annually in Federal Highway Administration's *Highway Statistics* (USDOT, FHA 2004).

Directions: Road congestion is defined by the RCI, which is defined as the ratio of traffic volume to road capacity, based on the 2003 Urban Mobility Study published by the TTI (TTI 2004). The RCI, which varies from city to city, is a function of traffic volume (also defined as annual average daily traffic in vehicles/day), road segment length, and number of lanes in the road segment (TTI 2004). The USDOT's Federal Highway Administration provides annual highway statistics containing urban and rural data by state on annual vehicle miles traveled (AVMT) and lane-miles (USDOT, FHA 2004). The calculations for determining the RCI by state are as follows.

Daily Vehicle Miles Traveled (DVMT) = AVMT / 365

Freeway DVMT = Urban Freeway DVMT + Rural Freeway DVMT

Principal Arterial DVMT = Urban Principal Arterial DVMT + Rural Principal Arterial DVMT

Freeway DVMT per Lane-Mile = (Urban Freeway DVMT / Urban Freeway Lane-Miles) + (Rural Freeway DVMT / Rural Freeway Lane-Miles)

Principal Arterial DVMT per Lane-Mile = (Urban Principal Arterial DVMT / Urban Principal Arterial Lane-Miles) + (Rural Principal Arterial DVMT / Rural Principal Arterial Lane-Miles)

RCI = (((Freeway DVMT per Lane-Mile) * Freeway DVMT) + ((Principal Arterial DVMT per Lane-Mile) * Principal Arterial DVMT)) / ((14,000 * Freeway DVMT) + (5,500 * Principal Arterial DVMT))

Download Annual Freeway Vehicle-Miles Traveled, by State, Annual Rural Principal Arterial Vehicle-Miles Traveled, by State, Annual Urban Principal Arterial Vehicle-Miles Traveled, by State, and Lane-Miles Traveled by State data from the Highway Statistics. Calculate Roadway Congestion based on the equations above. Import the resulting math into a GIS program and join it with the state shapefiles to create a Roadway Congestion indicator layer. A detailed example calculation follows for the state of New York.

First, Calculate the total freeway DVMT for the state of New York.

Table A. Annual freeway vehicle-miles traveled, by state (USDOT, FHA 2002).

	Interstate (Rural)	Interstate (Urban)	Other Freeways and Expressways
…			

	Interstate (Rural)	Interstate (Urban)	Other Freeways and Expressways
New York	7,558	17,568	15,982
…			

Using Table A for the state of New York:

Rural Freeway AVMT = 7,558 million miles

Urban Freeway AVMT = 17,568 + 15,982 = 33,550 million miles

Therefore:

Rural Freeway DVMT = (7,558 * 1,000,000) / 365 = 20,706,849.32 miles

Urban Freeway DVMT = (33,550 * 1,000,000)/ 365 = 91,917,808.22 miles

Freeway DVMT = 20,706,849.32 + 91,917,808.22 = 112,624,657.54 miles

Second, calculate the principal arterial Daily Vehicle Miles Traveled (DVMT) for the state of New York.

Table B. Annual rural principal arterial vehicle-miles traveled, by state (USDOT, FHA 2002).

	Principal Arterial (Rural)	Minor Arterial (Rural)	Major Collector (Rural)	Minor Collector (Rural)	Local (Rural)
…					
New York	5,120	6,232	5,279	8,903	4,361
…					

Using Table B for the state of New York:

Rural Principal Arterial AVMT = 5,120 + 6,232 + 5,279 + 8,903 + 4,361 = 29,895 million miles.

Therefore:

Rural Principal Arterial DVMT = (29,895 * 1,000,000) / 365 = 81,904,109.59 miles.

Table C. Annual urban principal arterial vehicle-miles traveled, by state (USDOT, FHA 2002)

	Principal Arterial (Urban)	Minor Arterial (Urban)	Major Collector (Urban)	Minor Collector (Urban)
…				
New York	16,888	21,646	7,691	13,494
…				

Using Table C for the state of New York:

Urban Principal Arterial AVMT = 16,888 + 21,646 + 7,691 + 13,494 = 59,719 million miles.

Therefore:

Urban Principal Arterial DVMT = (59,719 * 1,000,000) / 365 = 163,613,698.63 miles

The total principal arterial DVMT can now be calculated as:

Principal Arterial DVMT = 81,904,109.59 + 163,613,698.63 = 245,517,808.22 miles

Third, calculate the freeway DVMT per lane-mile and principal arterial DVMT per lane-mile.

Table D. Lane-miles traveled by state (USDOT, FHA 2002)

State	Urban (Freeway)	Urban (Principal Arterial)	Rural (Freeway)	Rural (Principal Arterial)
…				
New York	7,543	84,876	3,875	143,114
…				

Using Table D for the state of New York:

Urban Freeway Lane-Miles = 7,543 lane-miles

Rural Freeway Lane-Miles = 3,875 lane-miles

Urban Principal Arterial Lane-Miles = 84,876 lane-miles

Rural Principal Arterial Lane-Miles = 143,114 lane-miles

Therefore:

Freeway DVMT per Lane-Mile = (Urban Freeway DVMT / Urban Freeway Lane-Miles) + (Rural Freeway DVMT / Rural Freeway Lane-Miles)

Freeway DVMT per Lane-Mile = (91,917,808.22 / 7,543) + (20,706,849.32 / 3,875)

= 17,529.55 DVMT per Lane-Mile for the State of New York.

Principal Arterial DVMT per Lane-Mile = (Urban Principal Arterial DVMT / Urban Principal Arterial Lane-Miles) + (Rural Principal Arterial DVMT / Rural Principal Arterial Lane-Miles)

Principal Arterial DVMT per Lane-Mile = (163,613,698.63 / 84,876) + (81,904,109.59 / 143,114) = 2,499.98 DVMT per Lane-Mile for the State of New York.

Finally, calculate the RCI for the state of New York.

RCI = (((Freeway DVMT per Lane-Mile) * (Freeway DVMT)) + ((Principal Arterial DVMT per Lane-Mile) * Principal Arterial DVMT)) / ((14,000 * Freeway DVMT) + (5,500 * Principal Arterial DVMT)))

Therefore:

RCI = (((17,529.55 * 112,624,657.54) + (2,499.98 * 245,517,808.22)) / ((14,000 * 112,624,657.54) + (5,500 * 245,517,808.22))) = 0.884 for the State of New York.

Indicator Measure: Roadway Congestion classifications were defined as follows based on information from Pima Association of Governments (Pima Association of Governments 2004):

Very Low Vulnerability	(1):	< 0.57 RCI (Low Level of Congestion)
Low Vulnerability	(2):	Not Applicable
Moderate Vulnerability	(3):	>= 0.57 – <2 RCI (Moderate Level of Congestion)
Vulnerable	(4):	Not Applicable
High Vulnerability	(5):	>= 2 RCI (Heavy to Severe Level of Congestion)

Rules: Every installation is located primarily in one state, although several installations do cross state boundaries. The region around an installation takes on the classification of the state in which the installation is primarily located.

Sustainability Issue: Infrastructure

Indicator: Traffic Volume (TR4)

Variables: Annual Average Daily Traffic per Lane (AADT)

Scale: State

Year: 2001

Data Sources:

Chen, Ciao, Zhanfeng Jia, and Pravin Varaiya, *Causes and Cures of Highway Congestion* (University of California at Berkeley, Berkeley, CA, 2001), available through URL:

http://paleale.eecs.berkeley.edu/~varaiya/papers_ps.dir/csmpaperv3.pdf

Federal Highway Administration, U.S. Department of Transportation, *Highway Statistics 2001* (Table HM-62, Average Daily Traffic per Lane on Principal Arterials; Appendix B, Methodology for 2002 Annual Report) (Office of Highway Policy Information, Washington, DC, 2002), available through URL:

http://www.fhwa.dot.gov/ohim/hs01/aspublished/hm62.htm

http://mobility.tamu.edu/ums/study/methods/entire_methodology.pdf

TTI, *Urban Mobility Study* (Appendix A Exhibit A-17, 2000 Roadway Congestion Index) (Texas A&M University, College Station, TX, 2002), available through URL:

http://mobility.tamu.edu/ums/study/appendix_A/exhibit_A-17.pdf

TTI, *The Keys to Estimating Mobility* (Chapter 5: Recommended Mobility Measures) (Texas A&M University, College Station, TX, 2003), available through URL:

http://mobility.tamu.edu/ums/estimating_mobility/chapter5.pdf

Logic: This indicator provides a measurement of the congestion of the local road network in the region surrounding a military installation in terms of annual average daily traffic per lane. Traffic volume is an indicator of potential problems using the local roads near the installation. This addresses traffic from the military operations standpoint. Congestion problems would place the military installation in a vulnerable state, affecting the type and intensity of training that could take place on the installation. For instance, commute times for work related travel for the local community surrounding and including the installation would be extended longer than normally expected as a result of congestion problems (TTI 2003). Heavy to severe congestion areas also impacts the quality of life for the local community (see Commute Times as a Quality of Life sustainability indicator). Local roads within the proximity of a large MSA provide higher risks of congested travel and increasing potentials for vehicular accidents (C. Chen et al. 2001).

Additionally, it is important to note this data is on the state level, not community or installation. Hence, it may be skewed by local "hotspots." In other words, if a state has one area with high local traffic volumes, it could skew the data for the entire state causing it to be classified as high traffic volumes regardless of the characteristics of the remaining majority of the state. Because of this concern, it is important to use local knowledge in interpreting the traffic volume classifications. This indicator should be taken in context and used in conjunction to proximity to MSA as a corroborating factor.

Replicable: This indicator could be replicated every year based on information updated annually in Federal Highway Administration's Highway Statistics (USDOT, FHA 2002).

Directions: Road access is defined by annual average daily traffic (AADT), which is the number of vehicles passing through a particular road segment (USDOT, FHA 2002). The USDOT's Federal Highway Administration provides annual highway statistics containing urban and rural data by state on AADT. The traffic volume levels (as illustrated in Table 1of the above-mentioned source) were determined by information obtained from Appendix B of the 2002 Urban Mobility Study by the Texas Transportation Institute (TTI 2002). Download the Highway Statistics data into a GIS program and join it with the state shapefiles to create a Traffic Volume indicator layer.

Indicator Measure: Traffic Volume classifications were defined as follows based on definitions provided in the Texas Transportation Institute's *2002 Urban Mobility Study* (TTI 2002):

Very Low Vulnerability	(1):	<=5500 AADT (Low Traffic Volume)
Low Vulnerability	(2):	Not Applicable
Moderate Vulnerability	(3):	>5500 – <=7000 AADT (Medium Traffic Volume)
Vulnerable	(4):	Not Applicable
High Vulnerability	(5):	>7000 AADT (High Traffic Volume)

Rules: Every installation is located primarily in one state, although several installations do cross state boundaries. The region around an installation takes on the classification of the state in which the installation is primarily located.

Appendix B: SIRRA Indicator Data Values

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
1010001	1	2	3	1	3	1	1	3	1	1	1	5	1	1	1	1	1	3	1	1	5	3	1	42
1010002	1	2	4	1	3	1	1	3	1	1	1	5	1	1	1	1	1	3	1	3	3	3	1	43
1010003	1	2	4	1	3	1	1	3	1	1	1	5	1	1	1	1	1	3	1	1	3	3	1	41
1010004	1	2	4	1	3	3	1	3	1	1	1	5	1	1	1	1	1	3	1	3	1	3	1	43
1010005	1	2	4	1	3	1	1	3	1	1	1	5	1	1	1	1	1	3	1	3	1	3	1	41
1020001	1	2	3	1	3	5	1	1	1	1	1	5	1	1	1	1	1	1	3	1	1	3	1	40
1020002	1	3	3	1	3	5	1	3	1	1	1	5	1	1	1	1	1	1	3	3	1	3	1	45
1020003	1	3	4	1	3	3	1	3	1	1	1	5	1	1	1	1	1	1	3	1	1	3	1	42
1020004	1	2	3	1	3	5	1	3	1	1	1	5	1	1	1	1	1	1	3	1	1	3	1	42
1020005	1	3	3	2	3	5	1	3	1	1	1	5	1	1	1	1	1	1	3	3	1	3	1	46
1030001	1	2	3	1	3	1	1	1	1	1	1	5	1	1	1	1	1	1	1	1	3	3	1	36
1030002	1	3	2	2	3	1	1	3	1	1	1	4	1	1	1	1	1	1	1	3	3	3	1	40
1030003	2	3	3	2	3	3	1	5	1	1	1	5	1	1	1	1	1	1	1	3	1	3	1	45
1040001	1	3	3	2	3	1	2	3	1	1	1	5	1	1	1	3	1	1	1	1	3	3	3	45
1040002	2	3	3	2	3	5	2	5	1	1	2	5	1	1	1	3	1	1	1	3	1	3	3	53
1050001	1	3	2	1	3	3	1	3	1	1	1	5	1	1	1	1	1	1	1	3	1	3	1	40
1050002	1	3	1	1	3	5	1	3	1	1	1	5	1	1	1	1	1	1	1	1	1	3	1	39
1050003	2	3	1	3	3	3	1	5	3	1	2	5	1	1	1	1	1	1	1	2	1	3	1	46
1060001	3	4	2	3	3	5	1	5	3	2	2	5	1	1	1	1	1	3	1	4	1	3	1	56
1060002	2	3	3	3	3	5	2	5	3	2	1	5	1	1	1	1	1	3	1	3	1	3	3	56
1060003	3	4	2	3	3	5	2	5	3	2	2	5	1	1	1	1	1	3	1	4	1	3	3	59

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
1070001	1	3	3	3	3	1	2	3	2	1	1	5	1	1	1	1	1	5	1	1	1	3	3	47
1070002	3	4	3	3	3	3	2	5	3	2	2	5	1	1	1	1	1	5	1	2	1	3	3	58
1070003	3	3	3	3	3	3	2	3	3	2	2	5	1	1	1	1	1	5	1	1	1	3	3	54
1070004	4	4	3	3	3	3	3	3	3	2	1	5	2	1	1	1	1	5	1	1	1	3	5	59
1070005	4	4	2	2	3	3	4	1	3	2	1	5	2	1	1	1	1	5	1	3	1	3	5	58
1080101	1	3	3	1	3	1	2	3	1	1	1	5	1	1	1	1	1	5	1	3	1	3	3	46
1080102	1	3	3	2	3	1	2	1	1	1	2	5	1	1	1	1	1	5	1	3	1	1	1	42
1080103	1	3	2	2	3	1	2	1	1	1	2	5	1	1	1	1	1	5	1	3	1	1	1	41
1080104	3	3	3	2	3	3	2	3	3	2	2	5	1	1	1	1	1	5	1	1	1	3	3	53
1080105	1	3	2	2	3	3	2	1	1	1	2	5	1	1	1	1	1	5	1	3	1	1	1	43
1080106	1	3	2	2	3	1	2	1	2	1	1	5	1	1	1	1	1	5	1	3	1	1	1	41
1080107	3	3	2	2	3	3	2	3	2	1	1	5	1	1	1	1	1	5	1	3	1	1	1	47
1080201	3	3	3	2	3	5	3	5	3	2	1	5	2	1	1	1	1	5	1	1	1	3	5	60
1080202	3	4	3	2	3	3	3	3	3	2	1	5	2	1	1	1	1	5	1	2	1	3	5	58
1080203	3	3	2	2	3	3	3	3	3	1	1	4	2	1	2	1	1	5	1	3	1	3	3	54
1080204	4	4	3	2	3	3	4	5	3	2	1	4	2	1	1	1	1	5	1	4	1	3	5	63
1080205	4	4	3	2	3	3	4	5	3	2	1	4	1	1	2	1	1	5	1	2	1	3	5	61
1080206	3	4	3	2	3	3	4	3	3	2	1	4	2	1	1	1	1	5	1	3	1	3	5	59

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
1080207	4	4	3	2	3	3	4	3	3	2	1	4	1	1	2	1	1	5	1	4	1	3	5	61
1090001	4	5	2	2	3	3	4	3	3	2	2	5	2	2	1	1	1	5	1	5	1	3	5	65
1090002	4	4	1	3	3	5	4	5	4	2	1	4	2	2	1	1	1	5	1	2	1	3	5	64
1090003	4	4	3	2	3	3	5	1	3	2	1	4	2	1	1	1	1	5	1	3	1	3	5	59
1090004	4	4	2	2	3	3	5	5	4	2	1	5	2	2	1	1	1	5	1	4	1	3	5	66
1090005	4	4	2	3	3	3	5	5	3	2	1	4	2	1	1	1	1	5	1	1	1	3	5	61
1100001	4	4	3	2	3	3	5	1	3	2	1	4	1	1	1	1	1	5	1	3	1	3	5	58
1100002	4	4	3	3	3	3	5	3	3	2	1	4	1	1	2	1	1	5	1	1	1	3	5	60
1100003	4	4	3	2	3	3	5	3	3	2	1	4	1	1	1	1	1	5	1	3	1	3	5	60
1100004	4	4	3	2	3	3	5	3	3	2	1	5	1	1	2	1	1	5	1	5	1	3	5	64
1100005	4	4	3	2	3	5	4	3	3	2	1	5	1	1	2	1	1	5	1	3	1	3	5	63
1100006	4	4	3	2	3	3	4	3	3	2	1	5	1	1	2	1	1	5	1	3	1	3	5	61
1100007	1	3	1	1	3	3	5	3	4	2	1	5	1	1	1	1	1	5	1	5	1	3	5	57
1110000	1	3	3	2	3	1	2	3	1	1	1	5	1	1	1	1	1	3	3	3	1	1	1	43
2010001	1	3	2	2	3	5	2	3	2	1	1	5	2	1	1	1	1	1	1	3	1	3	3	48
2010002	1	3	2	2	3	5	2	3	2	1	1	5	1	1	1	1	1	1	1	3	1	1	1	43
2010003	1	3	2	2	3	5	2	3	1	1	2	5	1	1	1	1	1	1	1	3	1	3	1	45
2010004	3	3	3	1	3	5	2	5	1	1	1	5	2	1	1	1	1	1	1	1	1	3	5	51
2010005	1	3	2	3	3	5	2	3	1	1	2	5	1	1	1	1	1	1	1	3	1	1	1	44
2010006	1	3	3	1	3	5	2	3	1	1	1	5	2	1	1	1	1	1	1	3	1	3	5	49
2010007	1	3	2	3	3	5	2	3	1	1	2	5	1	1	1	1	1	1	1	1	1	1	1	42

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
2020001	2	3	2	2	3	5	2	5	1	1	1	5	2	1	1	1	1	3	1	3	1	3	5	54
2020002	1	3	3	2	3	5	2	1	1	1	1	5	2	1	1	1	1	3	1	3	1	3	5	50
2020003	2	3	3	2	3	5	2	3	3	2	1	5	2	1	2	1	1	3	1	4	1	3	3	56
2020004	2	3	3	1	3	5	2	3	1	1	1	5	2	1	1	1	1	3	1	1	1	3	5	50
2020005	2	3	3	1	3	5	2	1	2	1	1	4	2	1	1	1	1	3	1	1	1	3	5	48
2020006	2	3	3	2	3	5	2	5	3	1	1	4	2	1	2	1	1	3	1	4	1	3	5	58
2020007	3	4	3	3	3	5	2	5	3	1	1	5	3	1	1	1	1	3	1	4	1	3	5	62
2020008	3	4	3	3	3	5	2	5	3	2	1	5	2	1	2	1	1	3	1	4	1	3	5	63
2030101	4	5	3	2	3	3	2	3	3	2	2	5	3	2	1	3	3	5	1	2	1	3	5	66
2030102	4	5	2	2	3	3	2	3	3	2	2	5	2	2	2	3	3	5	1	5	1	3	5	68
2030103	4	5	2	2	3	3	3	5	3	2	2	5	5	2	2	3	3	5	1	5	1	3	5	74
2030104	4	5	1	2	3	5	3	3	4	2	3	5	5	2	3	3	3	5	1	5	1	3	5	76
2030105	4	4	2	3	3	3	4	3	3	2	2	5	5	2	2	3	3	5	1	4	1	3	5	72
2030201	3	5	1	2	3	5	2	3	4	2	1	5	2	1	1	3	3	5	1	2	1	3	5	63
2030202	4	5	1	2	3	5	2	5	4	2	2	5	2	2	2	3	3	5	1	4	1	3	5	71
2040101	3	3	2	2	3	5	2	3	2	1	1	4	2	1	2	3	3	5	1	1	1	3	5	58
2040102	3	3	2	1	3	3	2	3	2	1	1	4	2	1	1	3	3	5	1	1	1	3	5	54
2040103	3	3	1	3	3	3	1	3	2	1	2	4	3	1	2	3	3	5	1	3	1	3	3	57

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
2040104	3	3	2	4	3	3	2	5	2	1	1	5	3	1	2	3	3	5	1	2	1	3	5	63
2040105	4	4	3	3	3	3	3	3	3	2	1	5	5	1	2	3	3	5	1	4	1	3	5	70
2040106	3	4	2	3	3	3	1	3	3	3	2	5	3	1	2	3	3	5	1	2	1	3	3	62
2040201	4	4	3	3	3	3	2	5	4	2	2	5	5	1	2	3	3	5	1	5	1	3	5	74
2040202	4	5	3	2	3	5	3	5	4	2	2	5	5	2	2	3	3	5	1	4	1	3	5	77
2040203	3	4	2	2	3	5	1	3	3	3	2	5	3	1	2	3	3	5	1	4	1	3	3	65
2040204	1	3	1	1	3	3	5	1	4	2	1	4	5	1	1	3	3	5	1	5	1	3	5	62
2040205	4	4	3	3	3	3	5	3	3	2	1	5	3	1	3	3	3	5	1	5	1	3	5	72
2040206	4	4	2	2	3	3	4	5	4	2	2	4	5	2	2	3	3	5	1	5	1	3	5	74
2040207	4	4	2	3	3	5	5	5	4	2	1	4	3	1	3	3	3	5	1	4	1	3	5	74
2040301	4	4	2	3	3	5	4	5	4	2	1	5	5	1	2	3	3	5	1	5	1	3	5	76
2040302	3	4	1	2	3	3	4	5	4	2	2	4	5	2	2	3	3	5	1	4	1	3	5	71
2050101	3	3	2	1	3	5	2	5	2	1	1	4	2	1	2	1	1	5	1	1	1	3	5	55
2050102	1	3	3	1	3	5	2	3	2	1	1	4	2	1	2	1	1	5	1	1	1	3	5	52
2050103	3	3	3	1	3	5	2	3	2	1	2	3	2	1	2	1	1	5	1	1	1	3	5	54
2050104	1	3	3	1	3	3	1	1	2	1	1	3	2	1	1	1	1	5	1	3	1	3	5	47
2050105	1	3	3	1	3	5	2	1	2	1	1	3	2	1	1	1	1	5	1	1	1	3	5	48
2050106	3	3	2	1	3	5	1	1	2	1	1	4	3	1	2	1	1	5	1	1	1	3	3	49
2050107	3	4	2	1	3	5	1	3	3	3	2	4	3	1	2	1	1	5	1	3	1	3	3	58
2050201	1	3	2	2	3	5	1	1	3	2	1	3	3	1	2	1	1	5	1	1	1	3	3	49
2050202	1	3	2	1	3	3	1	3	2	1	1	3	3	1	2	1	1	5	1	3	1	3	3	48

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
2050203	1	3	2	2	3	5	1	3	2	2	1	3	3	1	2	1	1	5	1	1	1	3	3	50
2050204	1	3	2	2	3	5	1	3	3	4	1	3	3	1	2	1	1	5	1	1	1	3	3	53
2050205	1	3	2	1	3	5	1	3	2	1	1	3	3	1	2	1	1	5	1	1	1	3	3	48
2050206	3	3	2	1	3	5	1	3	3	3	2	3	3	1	3	1	1	5	1	1	1	3	3	55
2050301	3	3	2	2	3	5	1	3	3	4	2	4	3	1	2	1	1	5	1	3	1	3	3	59
2050302	2	3	2	1	3	5	1	3	3	4	2	3	3	1	2	1	1	5	1	1	1	3	3	54
2050303	1	3	2	2	3	5	1	3	3	4	1	3	3	1	2	1	1	5	1	1	1	3	3	53
2050304	3	3	2	2	3	5	1	3	3	4	2	3	3	1	1	1	1	5	1	1	1	3	3	55
2050305	3	4	2	2	3	5	1	3	3	4	2	4	3	1	2	1	1	5	1	2	1	3	3	59
2050306	3	4	2	3	3	3	2	5	3	2	1	4	3	1	3	1	1	5	1	4	1	3	3	61
2060001	1	3	1	2	3	5	3	3	4	2	1	3	5	1	1	1	1	5	3	5	1	3	5	62
2060002	3	3	1	3	3	5	4	5	4	2	1	4	5	1	3	1	1	5	3	4	1	3	5	70
2060003	4	4	2	3	3	5	3	3	3	2	2	4	5	1	4	1	1	5	3	4	1	3	5	71
2060004	4	4	1	3	3	5	3	3	4	2	2	3	5	2	5	1	1	5	3	5	1	3	5	73
2060005	2	3	1	2	3	3	4	5	4	2	1	3	5	1	2	1	1	5	3	4	1	3	5	64
2060006	4	4	2	3	3	5	3	3	4	2	2	3	5	2	5	1	1	5	3	3	1	3	5	72
2060007	1	3	1	2	3	3	3	5	4	2	1	3	5	1	2	1	1	5	3	3	3	3	5	63
2060008	2	3	1	3	3	5	5	5	4	2	1	3	5	1	2	1	1	5	3	3	3	3	5	69

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
2060009	1	3	1	3	3	1	4	5	4	2	1	3	5	1	2	1	1	5	3	4	5	3	5	66
2060010	2	3	1	4	3	3	5	5	4	2	1	3	4	1	2	1	1	5	3	4	5	3	5	70
2070001	1	3	2	2	5	5	2	3	3	4	1	3	2	1	1	3	1	3	3	3	1	3	3	58
2070002	1	3	2	2	5	5	2	3	3	4	1	3	4	1	2	3	1	3	3	3	1	3	5	63
2070003	1	3	2	3	5	3	2	3	3	4	2	3	3	1	2	3	1	3	3	3	1	3	3	60
2070004	3	3	3	3	3	5	2	5	3	4	2	3	3	1	3	3	1	3	3	4	1	3	5	69
2070005	1	3	2	3	3	5	3	5	3	4	2	4	3	2	2	3	1	3	3	4	1	3	5	68
2070006	1	3	2	3	3	5	3	3	3	4	2	4	3	1	2	3	1	3	3	3	1	3	5	64
2070007	1	3	3	3	3	5	2	1	3	4	2	3	3	2	3	3	1	3	3	3	1	3	3	61
2070008	4	4	4	5	3	5	3	5	3	2	1	3	5	1	3	3	1	3	3	2	1	3	5	72
2070009	3	4	2	3	3	3	3	3	3	2	2	3	5	1	3	3	1	3	3	3	1	3	5	65
2070010	4	5	3	3	3	5	5	3	3	2	2	3	5	2	4	3	1	3	3	4	1	3	5	75
2070011	2	3	1	3	3	5	3	5	4	2	1	3	5	2	4	3	1	3	3	3	1	3	5	68
2080101	1	3	1	1	3	5	3	3	4	2	1	3	3	1	1	3	1	5	3	3	1	3	5	59
2080102	1	3	1	3	3	5	3	3	4	2	2	3	3	2	3	3	1	5	3	1	1	3	5	63
2080103	1	3	3	3	3	5	3	5	3	3	2	4	3	2	2	3	1	5	3	1	1	3	5	67
2080104	1	3	1	3	3	5	3	5	4	2	2	3	3	2	2	3	1	5	3	1	1	3	5	64
2080105	1	3	2	3	3	5	3	5	4	2	1	4	3	1	2	3	1	5	3	1	1	3	5	64
2080106	1	3	3	4	3	5	3	5	3	2	1	5	3	2	2	3	1	5	3	2	1	3	5	68
2080107	1	3	1	3	3	5	3	3	4	2	2	3	3	2	3	3	1	5	3	1	1	3	5	63
2080108	1	4	1	2	3	5	3	3	4	2	2	3	3	3	5	3	1	5	3	1	1	3	5	66

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
2080109	1	3	1	3	3	3	3	1	4	2	1	3	3	2	2	3	1	5	3	3	1	3	5	59
2080110	1	3	1	2	3	3	3	3	4	2	1	2	3	1	2	3	1	5	3	1	1	3	5	56
2080201	1	3	3	3	3	5	3	5	3	4	2	5	3	2	1	3	1	5	3	1	1	3	5	68
2080202	1	3	2	3	3	5	3	3	3	4	2	4	3	2	1	3	1	5	3	3	1	3	5	66
2080203	1	3	2	3	3	5	3	3	3	3	2	5	3	2	1	3	1	5	3	1	1	3	5	64
2080204	1	3	3	4	3	5	3	3	3	3	2	5	3	2	2	3	1	5	3	1	1	3	5	67
2080205	1	3	2	4	3	5	3	3	3	2	2	5	3	2	1	3	1	5	3	3	1	3	5	66
2080206	1	4	1	3	3	5	3	5	4	2	2	4	3	2	3	3	1	5	3	4	1	3	5	70
2080207	1	3	2	3	3	5	3	3	3	2	2	5	3	2	2	3	1	5	3	1	1	3	5	64
2080208	1	4	1	3	3	5	3	3	3	2	2	3	3	2	3	3	1	5	3	4	1	3	5	66
3010101	1	3	2	3	3	5	3	5	4	4	2	5	3	2	2	3	1	3	3	2	1	3	5	68
3010102	1	3	2	2	3	3	3	5	3	2	1	4	4	1	2	3	1	3	3	1	1	3	5	59
3010103	1	3	2	2	3	5	2	5	4	3	1	5	5	1	2	3	1	3	3	1	1	3	3	62
3010104	1	3	2	2	3	5	2	3	3	2	1	4	5	1	2	3	1	3	3	1	1	3	3	57
3010105	1	3	2	2	3	5	3	3	3	2	1	4	3	1	1	3	1	3	3	3	3	3	5	61
3010106	1	3	2	2	3	3	2	3	3	2	1	3	5	1	1	3	1	3	3	3	1	3	3	55
3010107	1	3	2	1	3	3	2	3	3	3	1	3	5	1	2	3	1	3	3	5	1	3	3	58
3010201	1	3	3	3	3	5	3	5	3	2	1	4	3	1	2	3	1	3	3	1	1	3	5	62
3010202	1	3	3	3	3	5	3	3	3	3	1	3	3	2	2	3	1	3	3	1	1	3	5	61
3010203	1	3	1	2	3	3	2	3	3	3	1	3	5	1	2	3	1	3	3	1	1	3	3	54
3010204	1	3	2	2	3	3	2	5	3	2	1	4	5	1	2	3	1	3	3	1	1	3	3	57

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
3010205	1	3	1	3	3	3	2	5	3	3	1	3	5	1	3	3	1	3	3	2	1	3	3	59
3020101	1	3	2	3	3	5	2	5	3	2	1	3	5	1	2	1	1	5	3	2	1	3	3	60
3020102	1	3	2	2	3	5	2	5	3	2	1	3	5	1	2	1	1	5	3	3	1	3	3	60
3020103	1	3	2	2	3	5	2	5	3	3	1	3	5	1	2	1	1	5	3	3	1	3	3	61
3020104	1	3	1	2	3	5	2	3	3	3	1	3	5	1	2	1	1	5	3	3	5	3	3	62
3020105	1	3	1	2	3	1	2	5	3	3	1	3	5	1	3	1	1	5	3	3	5	3	3	61
3020106	1	3	1	2	3	5	2	5	3	3	1	3	5	1	5	1	1	5	3	1	3	3	3	63
3020201	1	4	2	5	3	5	2	5	3	2	1	4	5	1	2	1	1	5	3	2	1	3	3	64
3020202	1	3	2	2	3	5	2	5	3	3	1	3	5	1	5	1	1	5	3	4	1	3	3	65
3020203	1	3	2	3	3	5	2	3	3	2	1	3	5	1	3	1	1	5	3	1	1	3	3	58
3020204	1	3	1	2	3	5	2	5	3	3	1	4	5	1	4	1	1	5	3	3	1	3	3	63
3030001	1	3	1	2	3	5	2	5	3	3	1	4	5	1	3	3	1	3	1	2	1	3	3	59
3030002	1	4	2	3	3	5	2	5	3	2	1	4	5	1	2	3	1	3	1	2	1	3	3	60
3030003	1	3	2	3	3	5	2	5	3	2	1	5	5	1	1	3	1	3	1	2	1	3	3	59
3030004	1	4	2	4	3	5	2	5	3	2	1	5	5	1	2	3	1	3	1	1	1	3	3	61
3030005	1	3	1	3	3	5	2	5	3	3	1	5	5	1	3	3	1	3	1	3	1	3	3	62
3030006	1	3	1	3	3	5	2	5	3	3	1	5	5	1	2	3	1	3	1	1	1	3	3	59
3030007	1	3	1	3	3	5	2	5	3	3	1	4	5	1	3	3	1	3	1	3	1	3	3	61
3040101	1	3	2	3	3	5	2	3	4	3	1	5	5	1	2	1	1	3	1	1	1	3	3	57
3040102	1	3	3	4	3	3	2	3	3	2	1	5	5	1	3	1	1	3	1	1	1	3	3	56
3040103	1	3	2	3	3	5	2	5	3	2	1	5	5	1	2	1	1	3	1	2	1	3	3	58

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
3040104	1	3	2	3	3	5	2	5	3	2	1	5	5	1	1	1	1	3	1	3	1	3	3	58
3040105	1	4	3	5	3	5	2	3	3	2	1	5	5	1	2	1	1	3	1	1	1	3	3	59
3040201	1	3	2	2	3	5	2	5	3	2	1	5	3	1	2	1	1	3	1	1	1	3	3	54
3040202	1	3	2	3	3	5	2	3	3	2	1	5	1	1	2	1	1	3	1	3	1	3	3	53
3040203	1	3	2	3	3	5	2	5	3	3	1	5	5	1	2	1	1	3	1	1	1	3	3	58
3040204	1	3	2	3	3	5	2	5	3	3	1	5	4	1	2	1	1	3	1	1	1	3	3	57
3040205	1	3	2	2	3	3	2	3	3	3	1	5	1	1	2	1	1	3	1	1	1	3	3	49
3040206	1	3	2	3	3	5	2	5	3	3	1	5	5	1	2	1	1	3	1	3	1	3	3	60
3040207	1	3	1	4	3	5	2	5	3	3	1	5	4	1	3	1	1	3	1	3	3	3	3	62
3050101	1	4	2	3	3	5	2	5	4	4	1	5	5	1	2	3	1	5	1	4	1	3	3	68
3050102	1	4	2	3	3	3	2	3	3	2	1	5	5	1	2	3	1	5	1	1	1	3	3	58
3050103	1	4	3	3	3	5	2	3	3	2	1	5	4	1	2	3	1	5	1	4	1	3	3	63
3050104	1	3	2	3	3	5	2	1	3	2	1	5	1	1	3	3	1	5	1	3	1	3	3	56
3050105	1	3	2	3	3	5	2	3	4	3	1	5	5	1	3	3	1	5	1	4	1	3	3	65
3050106	1	3	3	2	3	5	2	3	3	2	1	5	1	1	3	3	1	5	1	3	1	3	3	58
3050107	1	4	2	2	3	5	2	1	3	2	1	5	1	1	4	3	1	5	1	5	1	3	3	59
3050108	1	3	2	3	3	5	2	1	3	2	1	5	1	1	3	3	1	5	1	5	1	3	3	58
3050109	1	3	2	3	3	5	2	5	3	2	1	5	1	1	3	3	1	5	1	4	1	3	3	61
3050110	1	4	2	3	3	5	2	3	4	3	1	5	1	1	3	3	1	5	1	3	1	3	3	61
3050111	1	3	2	3	3	5	2	3	4	3	1	5	1	1	3	3	1	5	1	3	1	3	3	60
3050112	1	3	3	2	3	5	2	3	3	3	1	5	1	1	2	3	1	5	1	5	1	3	3	60

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
3050201	1	3	3	2	3	5	2	1	3	3	1	5	1	1	2	3	1	5	1	3	1	3	3	56
3050202	1	4	3	2	3	5	2	3	4	3	1	5	1	1	3	3	1	5	1	3	1	3	3	61
3050203	1	3	2	3	3	3	2	3	4	3	1	5	1	1	3	3	1	5	1	3	1	3	3	58
3050204	1	3	2	2	3	5	2	3	4	3	1	5	1	1	3	3	1	5	1	1	1	3	3	57
3050205	1	3	3	2	3	5	2	3	4	3	1	5	1	1	3	3	1	5	1	3	1	3	3	60
3050206	1	3	3	2	3	5	2	1	4	3	1	5	1	1	3	3	1	5	1	3	1	3	3	58
3050207	1	3	2	2	3	5	2	3	4	3	1	5	1	1	3	3	1	5	1	5	1	3	3	61
3050208	1	3	1	3	3	5	2	3	4	3	1	5	1	1	2	3	1	5	1	3	1	3	3	58
3060101	1	3	2	3	3	5	2	3	4	3	1	5	2	1	3	3	1	3	1	1	1	3	3	57
3060102	1	3	2	3	3	5	2	3	5	5	1	5	2	1	3	3	1	3	1	1	1	3	5	62
3060103	1	3	2	3	3	5	2	3	3	2	1	5	1	1	3	3	1	3	1	1	1	3	3	54
3060104	1	3	2	3	3	5	2	3	3	2	1	5	2	1	2	3	1	3	1	3	1	3	5	58
3060105	1	3	2	2	3	5	2	1	3	2	1	5	2	1	2	3	1	3	1	3	1	3	5	55
3060106	1	3	2	3	3	5	2	5	4	3	1	5	1	1	2	3	1	3	1	3	1	3	3	59
3060107	1	3	1	3	3	5	2	1	3	2	1	5	1	1	4	3	1	3	1	1	1	3	3	52
3060108	1	3	2	2	3	5	2	3	4	3	1	5	2	1	1	3	1	3	1	1	1	3	5	56
3060109	1	3	1	4	3	5	2	3	4	3	1	5	2	1	2	3	1	3	1	5	1	3	5	62
3060201	1	3	2	2	3	3	2	5	4	2	1	5	2	1	1	3	1	3	1	3	1	3	5	57
3060202	1	3	1	3	3	5	2	5	4	3	1	5	2	1	2	3	1	3	1	3	1	3	5	61
3060203	1	3	1	3	3	5	2	5	4	3	1	5	2	1	2	3	1	3	1	3	1	3	5	61
3060204	1	3	1	3	3	5	2	5	4	3	1	5	2	1	1	3	1	3	1	3	1	3	5	60

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
3070101	1	3	3	5	3	5	2	5	3	2	1	5	2	1	2	1	1	5	3	3	1	3	5	65
3070102	1	3	2	2	3	5	2	3	4	3	1	4	2	1	1	1	1	5	3	3	1	3	5	59
3070103	3	4	2	5	3	5	2	5	3	2	1	4	2	1	2	1	1	5	3	3	1	3	5	66
3070104	1	3	2	3	3	5	2	5	4	3	1	3	2	1	1	1	1	5	3	3	1	3	5	61
3070105	1	3	2	3	3	5	2	3	4	3	1	4	2	1	2	1	1	5	3	3	1	3	5	61
3070106	1	3	1	3	3	3	2	5	4	3	1	4	2	1	2	1	1	5	3	3	1	3	5	60
3070107	1	3	2	3	3	3	2	5	4	3	1	4	2	1	1	1	1	5	3	3	1	3	5	60
3070201	1	3	1	3	3	3	2	5	4	3	1	3	2	1	3	1	1	5	3	3	1	3	5	60
3070202	1	3	2	3	3	1	2	3	4	3	1	4	2	1	3	1	1	5	3	3	3	3	5	60
3070203	1	3	1	3	3	3	2	3	4	3	1	3	2	1	3	1	1	5	3	3	1	3	5	58
3070204	1	3	2	3	3	5	2	5	4	3	1	3	5	1	2	1	1	5	3	3	1	3	5	65
3070205	1	4	1	3	3	5	3	3	4	3	1	3	5	1	3	1	1	5	3	5	1	3	5	67

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
3080101	1	4	2	4	3	5	3	5	5	3	1	2	5	1	3	3	5	5	3	3	1	3	5	75
3080102	1	3	2	4	3	5	3	5	5	3	1	3	5	1	3	3	5	5	3	3	1	3	5	75
3080103	1	4	2	4	3	5	3	5	5	3	1	3	5	1	3	3	5	5	3	4	1	3	5	77
3080201	1	4	1	5	3	5	3	5	5	3	1	3	5	1	4	3	5	5	3	3	1	3	5	77
3080202	1	4	1	3	3	5	3	5	5	3	1	2	5	1	5	3	5	5	3	3	1	3	5	75
3080203	1	4	1	3	3	5	3	3	5	3	1	1	5	1	4	3	5	5	3	3	1	3	5	71
3090101	1	4	2	5	3	5	3	5	5	3	1	2	5	1	3	3	3	5	1	3	1	3	5	72
3090102	1	3	2	3	3	5	3	3	5	4	1	2	5	1	2	3	3	5	1	3	1	3	5	67
3090103	1	3	1	4	3	3	3	5	5	3	1	2	5	1	3	3	3	5	1	3	3	3	5	69
3090201	1	4	1	4	3	3	3	1	5	5	1	2	5	1	3	3	3	5	1	5	1	3	5	68
3090202	1	4	1	3	3	5	3	5	5	5	1	1	5	1	5	3	3	5	1	4	1	3	5	73
3090203	1	3	1	1	3	5	3	5	5	5	1	1	5	1	2	3	3	5	1	3	3	3	5	68
3090204	1	3	1	5	3	5	3	5	5	5	1	1	5	1	4	3	3	5	1	3	1	3	5	72
3090205	1	3	1	4	3	3	3	3	5	4	1	2	5	1	5	3	3	5	1	3	1	3	5	68
3100101	1	3	1	3	3	5	3	5	5	3	1	2	5	1	4	3	5	5	1	3	1	3	5	71
3100102	1	4	2	3	3	5	3	3	5	3	1	2	5	2	5	3	5	5	1	3	1	3	5	73
3100103	1	4	1	3	3	3	3	3	5	3	1	1	5	1	5	3	5	5	1	3	1	3	5	68
3100201	1	4	1	3	3	5	3	5	5	3	1	1	5	2	5	3	5	5	1	5	1	3	5	75
3100202	1	4	3	4	3	3	3	3	5	3	1	1	5	2	5	3	5	5	1	3	1	3	5	72
3100203	1	4	3	3	3	3	3	3	5	3	1	2	5	1	5	3	5	5	1	1	1	3	5	69
3100204	1	4	3	3	3	3	3	3	5	3	1	2	5	1	5	3	5	5	1	5	1	3	5	73

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
3100205	1	4	3	4	3	3	3	5	5	3	1	2	5	1	5	3	5	5	1	4	1	3	5	75
3100206	1	4	1	3	3	3	3	3	5	3	1	1	5	2	5	3	5	5	1	4	1	3	5	70
3100207	1	4	2	3	3	5	3	5	5	3	1	1	5	2	5	3	5	5	1	3	1	3	5	74
3100208	1	3	2	5	3	5	3	5	5	3	1	2	5	1	4	3	5	5	1	1	1	3	5	72
3110101	1	3	1	4	3	5	3	5	5	3	1	2	5	1	3	1	1	3	1	5	1	3	5	65
3110102	1	3	1	3	3	3	3	5	4	3	1	2	5	1	1	1	1	3	1	3	1	3	5	57
3110103	1	3	1	3	3	3	3	5	4	3	1	3	5	1	2	1	1	3	1	1	1	3	5	57
3110201	1	3	2	3	3	3	2	5	4	3	1	3	4	1	2	1	1	3	1	3	1	3	5	58
3110202	1	3	2	3	3	3	2	5	4	3	1	3	2	1	2	1	1	3	1	1	1	3	5	54
3110203	1	3	2	3	3	3	2	3	4	3	1	3	3	1	2	1	1	3	1	3	1	3	5	55
3110204	1	3	2	3	3	3	2	3	4	3	1	3	2	1	2	1	1	3	1	5	1	3	5	56
3110205	1	3	2	4	3	3	3	5	4	3	1	3	5	1	2	1	1	3	1	3	1	3	5	61
3110206	1	3	2	3	3	5	3	5	5	3	1	3	5	1	2	1	1	3	1	1	1	3	5	61
3120001	1	3	1	4	3	5	3	5	4	3	1	2	5	1	2	1	1	3	1	1	1	3	5	59
3120002	1	3	2	3	3	3	2	3	4	3	1	3	2	1	3	1	1	3	1	3	1	3	5	55
3120003	1	3	1	3	3	5	3	5	4	3	1	2	5	1	2	1	1	3	1	1	1	3	5	58
3130001	3	4	2	5	3	5	2	1	4	3	1	5	2	1	4	1	1	5	1	5	1	3	5	67
3130002	3	4	2	3	3	5	2	5	3	2	1	4	2	1	2	1	1	5	1	3	1	3	5	62

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
3130003	1	3	2	2	5	5	2	5	4	3	1	3	2	1	2	1	1	5	1	3	1	3	5	61
3130004	1	3	2	2	5	5	3	5	4	3	1	3	4	1	2	1	1	5	1	3	1	3	5	64
3130005	2	3	2	3	3	5	2	5	3	2	1	4	2	1	2	1	1	5	1	3	1	3	5	60
3130006	1	3	1	3	3	5	2	3	4	3	1	3	2	1	2	1	1	5	1	3	1	3	5	57
3130007	1	3	1	3	3	5	2	3	4	3	1	3	2	1	2	1	1	5	1	3	1	3	5	57
3130008	1	3	2	2	3	5	2	3	4	3	1	3	2	1	3	1	1	5	1	3	1	3	5	58
3130009	1	3	2	2	3	5	2	5	4	3	1	3	2	1	1	1	1	5	1	3	3	3	5	60
3130010	1	3	2	2	3	3	2	5	4	3	1	3	2	1	2	1	1	5	1	5	1	3	5	59
3130011	1	3	1	3	3	5	3	5	4	3	1	2	5	1	3	1	1	5	1	3	1	3	5	63
3130012	1	3	2	3	3	5	3	5	4	3	1	2	5	1	3	1	1	5	1	1	1	3	5	62
3130013	1	3	1	3	3	3	3	5	4	3	1	2	5	1	4	1	1	5	1	3	1	3	5	62
3130014	1	1	1	1	3	3	3	5	3	2	1	1	5	1	2	1	1	5	1	3	3	3	5	55
3140101	1	3	1	3	3	5	3	5	4	3	1	2	5	1	4	1	1	3	1	1	1	3	5	60
3140102	1	3	1	5	3	5	3	5	4	3	1	2	5	1	4	1	1	3	1	3	1	3	5	64
3140103	1	3	1	3	3	5	3	5	4	3	1	3	5	1	5	1	1	3	1	3	1	3	5	64
3140104	1	3	1	4	3	5	3	5	4	3	1	2	5	1	4	1	1	3	1	3	1	3	5	63
3140105	1	3	1	3	3	3	3	5	4	2	1	2	5	1	4	1	1	3	1	3	1	3	5	59
3140106	1	3	1	4	5	3	3	5	4	3	1	3	5	1	4	1	1	3	1	3	1	3	3	62
3140107	1	3	1	3	5	5	3	5	3	2	1	2	5	1	3	1	1	3	1	3	1	3	5	61
3140201	1	3	2	2	5	5	3	3	4	3	1	3	3	1	3	1	1	3	1	3	1	3	3	58
3140202	1	3	2	2	5	5	3	3	4	3	1	3	4	1	3	1	1	3	1	3	1	3	3	59

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
3140203	1	3	1	3	3	5	3	5	4	3	2	2	5	1	4	1	1	3	1	1	1	3	5	61
3140301	1	3	2	1	5	5	3	3	4	3	1	3	3	1	3	1	1	3	1	3	1	3	3	57
3140302	1	3	2	1	5	5	3	1	4	3	1	3	3	1	3	1	1	3	1	3	1	3	3	55
3140303	1	3	1	1	5	3	3	3	4	3	1	3	3	1	2	1	1	3	1	3	1	3	3	53
3140304	1	3	1	1	5	5	3	5	4	3	1	3	3	1	2	1	1	3	1	1	1	3	3	55
3140305	1	3	1	3	3	5	3	5	4	3	1	3	5	1	3	1	1	3	1	5	1	3	5	64
3150101	1	3	2	4	3	5	2	5	5	5	1	5	2	1	2	1	1	3	1	3	1	3	5	64
3150102	1	3	2	5	3	5	2	3	5	5	1	5	2	1	2	1	1	3	1	1	1	3	5	61
3150103	1	3	2	3	3	5	2	1	5	5	1	5	2	1	3	1	1	3	1	3	1	3	5	60
3150104	3	4	3	5	3	5	2	3	4	4	1	5	2	1	3	1	1	3	1	3	1	3	5	66
3150105	1	3	2	3	5	5	3	5	5	5	1	5	2	1	3	1	1	3	1	1	1	3	3	63
3150106	1	3	2	3	5	5	3	5	5	5	1	5	3	1	3	1	1	3	1	2	1	3	3	65
3150107	1	3	1	3	5	5	3	5	5	4	1	4	3	1	2	1	1	3	1	3	1	3	3	62
3150108	1	3	3	3	5	5	3	3	4	3	1	5	2	1	2	1	1	3	1	1	1	3	3	58
3150109	1	3	2	2	5	5	3	3	3	2	1	4	3	1	2	1	1	3	1	3	1	3	3	56
3150110	1	3	2	2	5	5	3	5	4	2	1	3	3	1	2	1	1	3	1	1	1	3	3	56
3150201	1	3	2	3	5	5	3	3	4	2	1	3	3	1	2	1	1	3	1	1	1	3	3	55
3150202	2	3	2	3	5	5	3	5	5	4	1	4	3	1	2	1	1	3	1	1	1	3	3	62

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
3150203	1	3	2	1	5	3	3	5	4	3	1	3	3	1	2	1	1	3	1	1	1	3	3	54
3150204	1	3	1	2	5	5	3	5	4	3	1	3	3	1	2	1	1	3	1	1	1	3	3	56
3160101	1	3	2	2	3	3	2	5	4	2	1	5	2	1	2	1	1	3	1	1	3	3	1	52
3160102	1	3	2	3	3	1	2	1	4	2	1	5	2	1	3	1	1	3	1	3	3	3	1	50
3160103	1	3	1	1	5	3	3	5	4	2	1	4	3	1	2	1	1	3	1	3	3	3	3	57
3160104	1	3	2	2	3	1	2	3	4	2	1	5	2	1	2	1	1	3	1	5	3	3	1	52
3160105	1	3	2	1	5	3	3	5	4	2	1	4	3	1	3	1	1	3	1	1	3	3	3	57
3160106	1	3	2	1	5	3	3	5	4	2	1	4	3	1	3	1	1	3	1	1	1	3	3	55
3160107	1	3	2	2	5	5	3	5	4	3	1	4	3	1	3	1	1	3	1	1	1	3	3	59
3160108	1	3	2	1	3	1	2	3	4	2	1	4	2	1	2	1	1	3	1	3	1	3	1	46
3160109	1	3	2	2	5	5	3	3	5	5	1	5	3	1	3	1	1	3	1	3	1	3	3	63
3160110	1	3	1	2	5	5	3	5	5	5	1	5	3	1	3	1	1	3	1	3	1	3	3	64
3160111	2	4	2	3	5	5	3	5	5	5	1	5	3	1	3	1	1	3	1	3	1	3	3	68
3160112	2	3	2	2	5	5	3	5	5	4	1	5	3	1	3	1	1	3	1	1	1	3	3	63
3160113	1	3	3	2	5	5	3	3	4	2	1	4	3	1	2	1	1	3	1	1	1	3	3	56
3160201	1	3	2	1	5	1	3	3	4	2	1	3	3	1	2	1	1	3	1	1	1	3	3	49
3160202	1	3	2	1	3	1	2	3	4	2	1	3	3	1	2	1	1	3	1	3	1	3	1	46
3160203	1	3	2	2	5	5	3	3	4	3	1	3	3	1	2	1	1	3	1	1	1	3	3	55
3160204	1	3	1	3	5	5	3	5	4	3	1	3	3	1	3	1	1	3	1	3	1	3	3	60
3160205	1	3	1	3	5	5	3	5	3	2	1	3	3	1	2	1	1	3	1	5	1	3	3	59
3170001	1	3	2	2	3	1	2	3	4	2	1	3	2	1	3	1	1	3	1	3	1	3	1	47

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
3170002	1	3	2	2	3	1	2	3	4	2	1	3	2	1	3	1	1	3	1	3	1	3	1	47
3170003	1	3	1	3	3	3	2	3	4	3	1	3	2	1	3	1	1	3	1	1	1	3	1	48
3170004	1	3	2	3	3	5	2	5	4	3	1	3	2	1	3	1	1	3	1	5	1	3	1	57
3170005	1	3	2	2	3	5	2	5	4	3	1	3	2	1	3	1	1	3	1	3	1	3	1	54
3170006	1	3	2	3	3	5	2	5	4	3	1	3	2	1	3	1	1	3	1	3	1	3	1	55
3170007	1	3	2	3	3	5	2	5	4	3	1	3	2	1	3	1	1	3	1	3	1	3	1	55
3170008	1	3	2	2	5	5	3	5	4	3	1	3	3	1	3	1	1	3	1	3	1	3	1	58
3170009	1	3	1	3	3	5	2	5	4	3	1	3	2	1	4	1	1	3	1	3	1	3	1	55
3180001	1	3	2	2	3	5	2	3	4	2	1	4	2	1	2	1	1	3	1	5	1	3	1	53
3180002	1	3	2	3	3	5	2	5	4	3	1	3	2	1	3	1	1	3	1	4	1	3	1	56
3180003	1	3	2	2	3	3	2	5	4	3	1	3	2	1	4	1	1	3	1	3	1	3	1	53
3180004	1	3	2	3	3	5	2	5	4	3	1	3	3	1	4	1	1	3	1	3	1	3	1	57
3180005	1	3	2	2	3	5	2	5	4	3	1	3	3	1	4	1	1	3	1	3	1	3	1	56
4010101	1	1	1	3	3	3	1	3	1	1	1	1	3	1	1	1	1	3	1	1	5	3	3	43
4010102	1	3	2	2	3	5	1	3	1	1	1	1	3	1	1	1	1	3	1	3	1	3	3	45
4010201	1	3	2	1	3	5	1	3	1	1	1	1	3	1	1	1	1	3	1	3	1	3	3	44
4010202	1	3	2	1	3	5	1	3	1	1	1	1	3	1	1	1	1	3	1	3	1	3	3	44
4010301	1	3	1	2	3	5	1	3	1	1	1	1	2	1	1	1	1	3	1	3	1	3	1	41

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
4010302	1	3	1	2	3	3	1	1	1	1	1	1	2	1	1	1	1	3	1	3	3	3	1	39
4020101	1	3	2	1	3	1	1	1	1	1	1	1	2	1	1	1	1	3	1	3	5	3	5	43
4020102	1	3	2	1	3	1	1	1	1	1	1	1	2	1	1	1	1	3	1	3	5	3	5	43
4020103	1	3	1	2	3	1	1	3	1	1	1	2	2	1	1	1	1	3	1	5	5	3	5	48
4020104	1	3	2	2	3	1	1	3	1	1	1	1	2	1	1	1	1	3	1	5	5	3	5	48
4020105	1	3	3	1	3	1	1	1	1	1	1	1	2	1	1	1	1	3	1	5	5	3	5	46
4020201	1	3	1	2	3	1	1	5	1	1	1	1	2	1	1	1	1	3	1	5	3	3	5	47
4020202	1	3	1	3	3	1	1	3	1	1	1	1	2	1	1	1	1	3	1	3	1	3	5	42
4020203	1	3	1	2	3	1	1	3	1	1	1	1	2	1	1	1	1	3	1	3	1	3	5	41
4020300	1	1	1	1	3	5	1	3	1	1	1	1	2	1	1	1	1	3	1	3	1	3	3	40
4030101	1	3	2	2	3	5	1	1	2	1	1	1	2	1	2	3	1	3	1	5	1	3	1	46
4030102	1	3	1	2	3	5	1	3	1	1	1	1	2	1	2	3	1	3	1	5	1	3	1	46
4030103	1	3	2	3	3	3	1	3	1	1	1	1	2	1	1	3	1	3	1	3	1	3	1	43
4030104	1	3	2	3	3	3	1	3	1	1	1	1	2	1	1	3	1	3	1	3	1	3	1	43
4030105	1	3	2	2	3	1	1	3	1	1	1	1	2	1	1	3	1	3	1	3	3	3	1	42
4030106	1	2	2	1	3	1	1	3	1	1	1	1	2	1	1	3	1	3	1	3	5	3	3	44
4030107	1	3	3	1	3	1	1	1	1	1	1	1	2	1	1	3	1	3	1	5	5	3	5	48
4030108	1	3	2	2	3	1	1	3	1	1	1	1	2	1	1	3	1	3	1	1	3	3	3	42
4030109	1	3	2	1	3	1	1	1	1	1	1	1	2	1	1	3	1	3	1	3	3	3	5	43
4030110	1	3	5	1	3	1	1	1	1	1	1	1	2	1	1	3	1	3	1	1	5	3	5	46
4030111	1	3	2	1	3	1	1	3	1	1	1	1	2	1	2	3	1	3	1	3	5	3	5	48

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
4030112	1	3	1	1	3	1	1	3	1	1	1	1	2	1	2	3	1	3	1	3	5	3	5	47
4030201	1	3	1	3	3	5	1	3	3	1	1	1	2	1	5	3	1	3	1	5	1	3	1	52
4030202	1	3	2	2	3	5	1	1	2	1	1	1	2	1	2	3	1	3	1	3	1	3	1	44
4030203	1	3	2	3	3	5	1	3	3	1	1	1	2	1	3	3	1	3	1	5	3	3	1	53
4030204	1	4	2	3	3	5	1	3	1	1	1	1	2	1	2	3	1	3	1	4	1	3	1	48
4040001	3	4	2	2	5	5	2	5	1	1	1	3	2	1	2	5	3	3	3	5	1	3	3	65
4040002	4	4	2	2	3	5	1	3	1	1	2	3	2	2	2	5	3	3	3	5	1	3	1	61
4040003	3	4	2	3	3	5	1	3	2	1	2	2	2	1	2	5	3	3	3	5	1	3	1	60
4050001	1	3	2	2	3	5	2	5	3	1	1	3	2	1	2	3	3	3	3	3	1	3	5	60
4050002	1	3	2	3	3	5	1	3	1	1	1	2	2	1	2	3	3	3	3	5	1	3	5	57
4050003	1	3	2	3	3	5	1	3	3	1	1	2	2	1	2	3	3	3	3	3	1	3	5	57
4050004	1	4	3	2	3	5	1	1	3	1	1	3	2	1	2	3	3	3	3	1	1	3	5	55
4050005	1	3	3	3	3	5	1	1	3	1	1	2	2	1	2	3	3	3	3	5	1	3	5	58
4050006	1	4	2	3	3	5	1	3	2	1	1	2	2	1	2	3	3	3	3	5	1	3	5	59
4050007	1	3	2	3	3	5	1	3	3	1	1	2	2	1	2	3	3	3	3	3	1	3	5	57
4060101	1	3	2	3	3	5	1	3	1	1	1	1	2	1	1	3	1	3	3	3	1	3	5	51
4060102	1	3	2	3	3	5	1	3	1	1	1	1	2	1	2	3	1	3	3	5	1	3	5	54
4060103	1	3	2	3	3	1	1	3	1	1	1	1	2	1	1	3	1	3	3	3	1	3	5	47

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
4060104	1	3	2	3	3	1	1	3	1	1	1	1	2	1	1	3	1	3	3	3	3	3	5	49
4060105	1	3	1	3	3	1	1	3	1	1	1	1	2	1	1	3	1	3	3	1	1	3	5	44
4060106	1	2	1	2	3	1	1	5	1	1	1	1	2	1	1	3	1	3	3	1	3	3	5	46
4060107	1	2	1	2	3	1	1	5	1	1	1	1	2	1	1	3	1	3	3	3	1	3	5	46
4060200	1	2	1	1	3	5	1	3	1	1	1	1	2	1	1	3	1	3	3	5	1	3	3	47
4070001	1	3	1	2	3	1	1	1	1	1	1	1	2	1	1	1	1	1	1	5	1	3	5	39
4070002	1	3	1	2	3	1	1	3	1	1	1	1	2	1	1	1	1	1	1	3	1	3	5	39
4070003	1	3	1	2	3	1	1	5	1	1	1	1	2	1	1	1	1	1	1	3	1	3	5	41
4070004	1	3	2	3	3	1	1	3	1	1	1	1	2	1	2	1	1	1	1	5	1	3	5	44
4070005	1	3	2	3	3	1	1	3	1	1	1	1	2	1	2	1	1	1	1	3	1	3	5	42
4070006	1	3	2	2	3	1	1	3	1	1	1	1	2	1	2	1	1	1	1	3	1	3	5	41
4070007	1	3	2	3	3	1	1	3	1	1	1	1	2	1	2	1	1	1	1	3	1	3	5	42
4080101	1	3	3	2	3	3	1	1	1	1	1	1	2	1	2	3	1	3	3	1	1	3	5	46
4080102	1	3	2	2	3	5	1	3	1	1	2	1	2	1	2	3	1	3	3	5	1	3	5	54
4080103	1	3	2	2	3	5	1	3	1	1	1	1	2	1	2	3	1	3	3	5	1	3	5	53
4080104	1	3	1	2	3	5	1	3	1	1	1	1	2	1	2	3	1	3	3	3	1	3	5	50
4080201	1	3	2	3	3	5	1	1	1	1	1	1	2	1	2	3	1	3	3	3	1	3	5	50
4080202	1	3	2	3	3	5	1	1	2	1	1	1	2	1	2	3	1	3	3	5	1	3	5	53
4080203	1	4	3	3	3	5	1	3	2	1	1	2	2	1	2	3	1	3	3	5	1	3	5	58
4080204	1	4	2	2	3	5	1	3	2	1	1	2	2	1	2	3	1	3	3	5	1	3	5	56
4080205	1	3	2	2	3	5	1	1	1	1	1	1	2	1	2	3	1	3	3	5	1	3	5	51

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
4080206	1	3	2	1	3	5	1	1	1	1	2	1	2	1	2	3	1	3	3	5	1	3	5	51
4080300	1	1	1	1	3	5	1	3	1	1	1	1	2	1	1	1	1	3	3	3	1	3	5	44
4090001	1	3	2	3	3	5	1	5	1	1	1	2	2	1	2	5	3	5	3	3	1	3	5	61
4090002	1	4	1	2	3	5	1	3	1	1	1	2	2	1	2	5	3	5	3	3	1	3	5	58
4090003	1	4	2	2	3	5	1	3	2	1	1	2	2	1	2	5	3	5	3	5	1	3	5	62
4090004	1	5	2	1	3	5	1	3	2	1	1	3	2	1	2	5	3	5	3	5	1	3	5	63
4090005	1	4	3	3	3	3	1	3	3	1	1	3	2	1	2	5	3	5	3	5	1	3	5	64
4100001	1	4	2	2	3	3	1	1	1	1	1	3	2	1	2	3	1	3	3	5	1	3	5	52
4100002	1	3	3	3	3	3	1	3	2	1	1	3	2	1	2	3	1	3	3	5	1	3	5	56
4100003	1	3	2	3	5	5	2	5	3	1	1	3	2	1	3	3	1	3	3	5	1	3	3	62
4100004	1	3	2	2	5	5	2	3	3	1	1	4	2	1	3	3	1	3	3	5	1	3	3	60
4100005	1	4	2	2	5	5	2	5	2	1	1	3	2	1	3	3	1	3	3	5	1	3	3	61
4100006	1	3	2	2	5	3	2	1	2	1	1	3	3	1	2	3	1	3	3	5	1	3	5	56
4100007	1	3	2	1	5	5	2	3	2	1	1	4	3	1	2	3	1	3	3	5	1	3	5	60
4100008	1	3	2	2	5	5	2	3	3	1	1	4	3	1	2	3	1	3	3	5	1	3	5	62
4100009	1	4	2	2	5	5	2	3	1	1	1	3	3	1	2	3	1	3	3	5	1	3	5	60
4100010	1	3	2	2	5	5	2	3	1	1	1	3	3	1	3	3	1	3	3	5	1	3	5	60
4100011	1	3	1	1	5	5	2	5	2	1	1	4	3	1	2	3	1	3	3	3	1	3	5	59

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
4100012	1	3	2	2	5	5	2	1	2	1	1	3	3	1	3	3	1	3	3	5	1	3	5	59
4110001	1	4	2	3	5	5	2	1	2	1	1	3	3	1	4	5	1	3	3	5	1	3	5	64
4110002	1	4	2	2	5	3	2	3	2	1	1	4	3	1	3	5	1	3	3	5	1	3	5	63
4110003	3	4	2	2	5	5	2	1	2	1	2	4	3	1	2	5	1	3	3	1	1	3	5	61
4110004	1	4	2	2	5	5	2	3	2	1	1	4	3	1	2	5	1	3	3	5	1	3	5	64
4120101	3	3	2	1	3	5	1	3	2	1	1	3	3	1	2	3	1	3	3	1	1	3	3	52
4120102	2	4	2	1	3	5	2	3	2	1	1	4	2	1	2	3	1	3	3	1	1	3	5	55
4120103	3	4	2	1	3	5	2	3	1	1	1	5	2	1	2	3	1	3	3	1	1	3	5	56
4120104	2	4	1	1	3	5	2	3	1	1	1	5	2	1	2	3	1	3	3	3	1	3	5	56
4120200	1	3	1	1	3	5	2	3	1	1	1	4	2	1	1	3	1	3	3	5	1	3	5	54
4130001	2	4	1	1	3	5	2	1	1	1	1	5	2	1	1	3	1	3	3	5	1	3	5	55
4130002	1	3	3	1	3	5	2	3	2	1	1	4	2	1	2	3	1	3	3	1	1	3	5	54
4130003	1	4	2	1	3	5	2	3	1	1	1	5	2	1	1	3	1	3	3	3	1	3	5	55
4140101	1	4	2	1	3	5	2	1	1	1	1	4	2	1	1	3	1	3	1	3	1	3	5	50
4140102	2	3	2	1	3	5	2	3	1	1	1	4	2	1	2	3	1	3	1	3	1	3	5	53
4140201	1	3	3	2	3	5	2	3	1	1	1	4	2	1	1	3	1	3	1	4	1	3	5	54
4140202	1	3	3	1	3	5	2	3	1	1	1	4	2	1	2	3	1	3	1	3	1	3	5	53
4140203	1	3	3	1	3	5	2	1	1	1	1	4	2	1	2	3	1	3	1	3	1	3	5	51
4150101	1	3	2	1	3	5	2	3	1	1	1	5	2	1	1	1	1	1	1	2	1	3	5	47
4150102	3	3	1	1	3	3	2	3	2	1	1	4	2	1	1	1	1	1	1	3	1	3	5	47
4150200	1	1	1	1	3	5	2	3	1	1	1	4	2	1	1	1	1	1	1	3	1	3	5	44

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
4150301	2	3	1	1	3	1	2	3	2	1	1	5	2	1	1	1	1	1	1	3	1	3	5	45
4150302	1	3	2	1	3	5	2	3	1	1	1	5	2	1	1	1	1	1	1	3	1	3	5	48
4150303	2	3	2	1	3	3	2	3	2	1	1	5	2	1	1	1	1	1	1	3	1	3	5	48
4150304	1	3	2	1	3	3	2	3	1	1	1	5	2	1	1	1	1	1	1	3	3	3	5	48
4150305	1	3	2	1	3	5	2	1	1	1	1	5	2	1	1	1	1	1	1	3	1	3	5	46
4150306	1	3	2	1	3	1	2	3	1	1	1	5	2	1	1	1	1	1	1	3	3	3	5	46
4150307	1	3	2	2	3	1	2	1	1	1	1	5	2	1	1	1	1	1	1	3	1	3	5	43
5010001	3	3	2	1	3	5	1	5	2	1	1	3	2	1	1	1	1	3	1	1	1	3	3	48
5010002	3	3	2	1	3	5	2	1	2	1	1	3	2	1	2	1	1	3	1	3	1	3	5	50
5010003	3	3	2	1	3	5	1	5	2	1	1	3	3	1	2	1	1	3	1	1	1	3	3	50
5010004	3	3	2	1	3	5	1	5	2	1	1	3	3	1	2	1	1	3	1	1	1	3	3	50
5010005	1	3	2	1	3	3	1	1	2	1	1	3	3	1	2	1	1	3	1	1	1	3	3	42
5010006	1	3	2	1	3	5	1	3	2	1	2	3	3	1	2	1	1	3	1	1	1	3	3	47
5010007	2	3	2	1	3	5	1	1	3	4	1	3	3	1	2	1	1	3	1	3	1	3	3	51
5010008	1	4	2	1	3	5	1	3	3	2	2	3	3	1	2	1	1	3	1	3	1	3	3	52
5010009	3	4	2	1	3	5	1	1	3	1	2	3	3	1	2	1	1	3	1	1	1	3	3	49
5020001	1	3	2	1	5	3	2	3	3	4	2	3	2	1	1	1	1	3	1	3	1	3	3	52
5020002	1	3	2	1	5	3	2	1	3	1	2	3	2	2	1	1	1	3	1	5	1	3	3	50

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
5020003	3	3	2	2	5	5	2	1	3	2	2	3	2	2	1	1	1	3	1	5	1	3	3	56
5020004	1	3	2	1	5	5	2	5	3	4	2	3	2	1	1	1	1	3	1	1	1	3	3	54
5020005	3	4	2	1	3	5	1	3	3	1	2	3	3	1	1	1	1	3	1	3	1	3	3	52
5020006	2	3	2	1	3	5	2	5	3	4	1	3	4	1	2	1	1	3	1	1	1	3	5	57
5030101	3	4	2	1	3	5	2	1	3	1	2	3	3	1	2	3	3	3	3	5	1	3	3	60
5030102	3	3	2	1	3	3	1	5	3	1	1	3	3	1	2	3	3	3	3	4	1	3	3	58
5030103	3	4	2	1	5	3	2	3	3	1	1	3	3	1	2	3	3	3	3	5	1	3	5	63
5030104	3	4	2	1	3	3	1	3	3	1	2	3	3	1	3	3	3	3	3	5	1	3	3	60
5030105	3	4	2	2	3	5	1	3	3	1	1	3	3	1	2	3	3	3	3	3	1	3	3	59
5030106	3	3	2	1	5	5	2	3	3	1	2	3	3	2	1	3	3	3	3	3	1	3	3	61
5030201	1	3	2	1	5	5	2	3	3	1	2	3	2	2	1	3	3	3	3	3	1	3	3	58
5030202	1	3	2	2	5	5	2	3	3	1	2	3	3	1	2	3	3	3	3	5	1	3	3	62
5030203	1	3	2	2	5	5	2	3	3	1	2	3	2	1	1	3	3	3	3	5	1	3	3	60
5030204	1	3	2	3	5	5	2	3	3	1	1	3	3	1	1	3	3	3	3	5	1	3	5	63
5040001	1	4	2	2	5	3	2	3	3	1	1	3	3	1	2	3	1	3	3	5	1	3	5	60
5040002	1	3	2	2	5	5	2	3	3	1	1	3	3	1	3	3	1	3	3	3	1	3	5	60
5040003	1	3	2	3	5	5	2	5	3	1	1	3	3	1	2	3	1	3	3	3	1	3	5	62
5040004	1	3	2	2	5	5	2	5	3	1	1	3	3	1	1	3	1	3	3	5	1	3	5	62
5040005	1	3	2	2	5	5	2	3	3	1	1	3	3	1	1	3	1	3	3	3	1	3	5	58
5040006	1	3	3	3	5	5	2	1	3	1	1	3	3	1	2	3	1	3	3	5	1	3	5	61
5050001	1	3	2	2	3	5	2	5	5	5	2	5	5	1	1	1	1	1	1	1	1	3	3	59

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
5050002	1	3	2	1	3	3	2	5	3	4	2	5	3	2	1	1	1	1	1	1	1	3	3	52
5050003	1	3	2	1	5	3	2	5	3	4	2	4	2	1	1	1	1	1	1	3	1	3	3	53
5050004	1	3	2	1	5	3	2	3	5	5	2	5	2	1	1	1	1	1	1	1	1	3	3	53
5050005	1	3	2	1	5	5	2	3	5	5	2	4	2	1	1	1	1	1	1	1	1	3	3	54
5050006	1	3	2	1	5	5	2	3	5	5	2	4	2	1	1	1	1	1	1	5	1	3	3	58
5050007	1	3	2	1	5	5	2	5	4	4	2	3	2	1	1	1	1	1	1	1	1	3	3	53
5050008	1	3	2	2	5	5	2	1	3	1	2	4	2	1	2	1	1	1	1	3	1	3	3	50
5050009	1	3	2	1	5	5	2	1	5	5	2	4	2	2	1	1	1	1	1	3	1	3	3	55
5060001	1	4	2	3	5	5	2	5	3	1	1	4	3	1	2	1	1	3	3	5	1	3	5	64
5060002	1	3	2	2	5	5	2	5	3	1	1	4	3	1	2	1	1	3	3	5	1	3	5	62
5060003	1	3	2	2	5	5	2	1	3	1	1	3	3	1	2	1	1	3	3	5	1	3	5	57
5070101	1	3	2	1	5	3	2	3	5	5	2	5	2	2	1	1	3	3	3	3	1	3	3	62
5070102	1	3	2	1	5	3	2	3	3	2	3	4	2	2	2	1	3	3	3	5	1	3	3	60
5070201	1	3	2	1	5	5	2	1	5	5	2	5	3	2	1	1	3	3	3	3	1	3	3	63
5070202	1	3	2	1	3	3	2	3	5	5	2	5	3	2	1	1	3	3	3	1	3	3	3	61
5070203	1	3	2	1	3	5	2	3	5	5	2	5	3	2	1	1	3	3	3	3	1	3	1	61
5070204	1	3	2	2	3	5	2	1	5	5	2	4	3	2	1	1	3	3	3	3	1	3	1	59
5080001	1	3	2	2	5	5	2	3	3	1	1	5	3	1	2	3	3	3	3	5	1	3	5	65

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
5080002	2	4	2	2	5	5	2	3	3	2	1	4	3	1	2	3	3	3	3	5	1	3	5	67
5080003	1	3	2	2	5	3	2	3	3	2	2	4	2	1	2	3	3	3	3	3	1	3	3	59
5090101	1	3	2	2	5	5	2	3	3	1	2	3	3	1	2	3	3	3	3	5	1	3	3	62
5090102	1	3	2	1	5	5	2	3	3	2	2	4	2	2	1	3	3	3	3	3	1	3	3	60
5090103	1	3	2	1	5	5	2	5	3	2	1	4	3	1	2	3	3	3	3	3	1	3	3	62
5090104	1	3	2	2	3	5	2	3	5	5	2	4	3	2	1	3	3	3	3	1	1	3	1	61
5090201	1	3	2	2	5	5	2	5	3	2	1	4	3	1	2	3	3	3	3	4	1	3	3	64
5090202	2	4	3	3	5	5	2	5	3	1	1	4	3	1	3	3	3	3	3	5	1	3	5	71
5090203	2	4	2	3	5	5	2	3	4	3	2	3	2	2	3	3	3	3	3	5	1	3	3	69
5100101	1	3	2	3	3	5	2	5	4	4	2	4	3	2	2	1	1	3	3	1	1	3	1	59
5100102	1	3	3	3	3	5	2	3	4	3	2	4	3	2	1	1	1	3	3	1	1	3	1	56
5100201	1	3	2	1	3	3	2	3	5	5	3	5	3	2	2	1	1	3	3	5	3	3	1	63
5100202	1	3	2	1	3	1	2	3	5	5	2	5	3	2	1	1	1	3	3	5	3	3	1	59
5100203	1	3	2	2	3	3	2	3	5	5	2	5	3	2	2	1	1	3	3	1	1	3	1	57
5100204	1	3	2	2	3	5	2	3	5	4	2	4	3	2	2	1	1	3	3	1	1	3	1	57
5100205	1	3	2	3	3	5	2	5	4	3	2	4	3	2	2	1	1	3	3	4	1	3	1	61
5110001	1	3	2	3	3	3	2	5	4	3	1	4	3	1	3	1	1	3	3	3	1	3	1	57
5110002	1	3	2	3	3	5	2	5	4	3	1	5	3	1	2	1	1	3	3	2	1	3	3	60
5110003	1	3	2	2	3	3	2	3	4	3	1	5	3	1	2	1	1	3	3	3	1	3	1	54
5110004	1	3	2	3	3	3	2	5	4	3	1	5	3	1	2	1	1	3	3	1	1	3	1	55
5110005	1	3	2	2	3	5	2	3	4	3	1	5	3	1	2	1	1	3	3	3	1	3	1	56

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
5110006	1	3	2	2	3	5	2	3	4	3	1	5	3	1	2	1	1	3	3	3	1	3	1	56
5120101	1	3	2	2	5	5	2	5	3	1	1	3	2	1	3	1	1	5	3	5	1	3	3	61
5120102	1	3	2	2	5	5	2	1	3	1	1	4	2	1	3	1	1	5	3	5	1	3	3	58
5120103	1	3	2	1	5	3	2	1	3	1	1	4	2	2	2	1	1	5	3	5	1	3	3	55
5120104	1	3	3	2	5	5	2	5	3	1	1	3	2	1	2	1	1	5	3	3	1	3	3	59
5120105	1	3	2	2	5	5	2	5	3	1	1	3	2	1	2	1	1	5	3	3	1	3	3	58
5120106	1	3	2	2	5	5	2	5	3	1	1	3	2	1	2	1	1	5	3	3	1	3	3	58
5120107	1	3	2	2	5	5	2	1	3	1	1	3	2	1	2	1	1	5	3	3	1	3	3	54
5120108	1	3	2	2	5	5	2	5	3	1	1	4	2	1	2	1	1	5	3	3	1	3	3	59
5120109	1	3	3	1	3	5	2	3	2	1	1	4	2	1	3	1	1	5	3	3	1	3	5	57
5120110	1	3	2	3	5	3	2	3	3	1	1	4	2	1	2	1	1	5	3	5	1	3	3	58
5120111	1	3	1	2	5	5	2	5	4	3	1	5	2	1	2	1	1	5	3	3	1	3	3	62
5120112	1	3	2	1	3	5	2	3	3	2	1	5	1	1	3	1	1	5	3	3	1	3	5	58
5120113	1	3	2	1	5	5	2	5	4	3	1	5	2	1	2	1	1	5	3	5	1	3	3	64
5120114	1	3	2	1	3	3	2	3	4	3	1	5	1	1	2	1	1	5	3	5	1	3	5	59
5120115	1	3	2	1	3	3	2	3	4	3	1	5	1	1	2	1	1	5	3	5	1	3	5	59
5120201	1	4	2	3	5	5	2	5	3	2	1	4	2	1	3	1	1	5	3	5	1	3	3	65
5120202	1	3	2	2	5	3	2	5	4	3	2	5	2	1	2	1	1	5	3	5	1	3	3	64

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
5120203	1	3	2	3	5	5	2	3	3	2	1	5	2	1	2	1	1	5	3	3	1	3	3	60
5120204	1	3	2	3	5	5	2	5	3	2	1	4	2	1	3	1	1	5	3	3	1	3	3	62
5120205	1	3	2	2	5	5	2	3	3	2	1	4	2	1	3	1	1	5	3	3	1	3	3	59
5120206	1	3	2	2	5	5	2	5	3	2	1	4	2	1	2	1	1	5	3	5	1	3	3	62
5120207	1	3	2	3	5	5	2	5	4	3	2	4	2	1	2	1	1	5	3	3	1	3	3	64
5120208	1	3	2	2	5	5	2	5	4	3	2	5	2	1	2	1	1	5	3	4	1	3	3	65
5120209	1	3	3	2	5	5	2	3	4	3	2	5	2	1	3	1	1	5	3	5	1	3	3	66
5130101	1	3	2	2	3	3	2	5	5	5	2	5	3	2	2	1	1	3	3	3	1	3	3	63
5130102	1	3	2	3	3	5	2	5	5	5	2	4	3	2	3	1	1	3	3	4	1	3	1	65
5130103	1	3	2	3	3	3	2	5	4	4	1	4	3	1	2	1	1	3	3	1	1	3	1	55
5130104	1	3	2	3	3	5	3	5	5	5	1	5	2	1	2	1	1	3	3	3	1	3	3	64
5130105	1	3	2	3	3	1	3	5	5	4	1	5	2	2	2	1	1	3	3	3	1	3	3	60
5130106	1	3	2	3	3	3	3	5	4	3	2	4	2	2	2	1	1	3	3	1	1	3	3	58
5130107	1	3	2	3	3	3	3	5	4	4	2	5	2	2	2	1	1	3	3	1	1	3	3	60
5130108	1	3	1	3	3	5	3	5	4	4	2	5	2	2	2	1	1	3	3	1	1	3	3	61
5130201	1	3	2	4	3	5	3	5	4	3	1	5	2	1	4	1	1	3	3	2	1	3	3	63
5130202	1	4	1	3	3	5	3	3	4	3	1	5	2	1	4	1	1	3	3	3	1	3	3	61
5130203	1	4	1	5	3	5	3	5	4	3	1	5	2	1	4	1	1	3	3	2	1	3	3	64
5130204	1	4	2	5	3	5	3	3	4	3	1	5	2	1	2	1	1	3	3	3	1	3	3	62
5130205	1	3	1	3	3	5	2	5	4	3	1	5	3	1	2	1	1	3	3	1	1	3	3	58
5130206	1	3	1	3	3	5	3	5	4	3	1	5	2	1	3	1	1	3	3	1	1	3	3	59

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
5140101	1	4	2	3	5	5	2	5	4	3	2	4	3	2	2	3	1	3	3	5	1	3	3	69
5140102	1	4	2	4	3	5	2	5	4	3	1	4	3	2	3	3	1	3	3	5	1	3	1	66
5140103	1	3	2	3	3	5	2	5	4	3	1	4	3	2	3	3	1	3	3	2	1	3	1	61
5140104	1	3	2	3	5	5	2	5	4	3	1	5	2	1	2	3	1	3	3	4	1	3	3	65
5140201	1	3	2	2	5	5	2	3	4	3	1	5	2	1	2	3	1	3	3	3	1	3	3	61
5140202	1	3	2	2	5	5	2	5	4	3	1	5	3	1	2	3	1	3	3	4	1	3	3	65
5140203	1	3	2	1	3	3	2	5	4	3	1	5	2	1	2	3	1	3	3	3	1	3	3	58
5140204	1	3	2	1	3	3	2	3	4	3	1	5	1	1	2	3	1	3	3	3	1	3	5	57
5140205	1	3	2	1	3	5	2	1	4	3	1	5	3	1	2	3	1	3	3	5	1	3	1	57
5140206	1	3	2	2	3	1	2	5	4	3	2	5	2	1	2	3	1	3	3	5	1	3	3	60
6010101	1	3	2	2	3	5	3	5	5	5	1	5	3	1	1	1	1	1	1	3	1	3	5	61
6010102	2	3	2	2	3	5	3	5	5	5	1	5	3	1	1	1	1	1	1	1	1	3	3	58
6010103	1	3	2	3	3	5	3	5	5	5	2	5	3	1	2	1	1	1	1	2	1	3	3	61
6010104	1	3	2	3	3	5	3	5	5	5	2	5	2	1	1	1	1	1	1	1	1	3	3	58
6010105	1	3	2	3	3	5	2	5	5	5	1	5	5	1	1	1	1	1	1	2	1	3	3	60
6010106	1	3	2	3	3	5	2	5	5	5	2	5	5	1	1	1	1	1	1	3	1	3	3	62
6010107	1	3	1	4	3	5	3	3	5	5	2	5	2	1	1	1	1	1	1	1	1	3	3	56
6010108	1	3	2	3	3	5	3	5	5	5	2	5	4	1	1	1	1	1	1	3	1	3	3	62

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
6010201	1	3	2	3	3	5	3	5	5	5	1	5	2	1	2	1	1	1	1	5	1	3	3	62
6010202	1	3	2	3	3	5	2	5	5	5	1	5	5	1	1	1	1	1	1	1	3	3	3	61
6010203	1	3	2	3	3	5	2	5	5	5	1	5	5	1	1	1	1	1	1	1	1	3	3	59
6010204	1	3	2	3	3	5	3	5	5	5	1	5	4	1	1	1	1	1	1	3	1	3	3	61
6010205	1	3	2	2	3	5	3	5	5	5	1	5	3	2	1	1	1	1	1	1	1	3	5	60
6010206	1	3	3	2	3	5	3	5	5	5	1	5	3	1	1	1	1	1	1	1	1	3	3	58
6010207	1	4	2	2	3	5	3	3	5	5	2	5	2	2	2	1	1	1	1	5	1	3	3	62
6010208	1	3	1	3	3	3	3	5	5	5	2	5	2	1	2	1	1	1	1	2	1	3	3	57
6020001	1	4	2	3	3	5	3	5	5	5	1	5	2	2	2	3	1	3	1	3	1	3	5	68
6020002	1	3	2	3	3	5	3	5	5	5	1	5	4	1	2	3	1	3	1	4	1	3	3	67
6020003	1	3	2	4	3	3	2	5	5	5	1	5	2	1	2	3	1	3	1	1	1	3	5	62
6020004	1	3	2	3	3	5	3	3	5	5	2	5	2	2	2	3	1	3	1	3	1	3	3	64
6030001	1	3	2	3	5	5	3	5	5	5	1	5	3	1	3	3	1	3	1	1	1	3	3	66
6030002	1	3	2	3	5	5	3	5	5	5	1	5	3	1	3	3	1	3	1	5	1	3	3	70
6030003	1	3	2	3	3	5	3	5	4	3	1	5	2	1	2	3	1	3	1	3	1	3	3	61
6030004	1	3	2	3	3	3	3	3	4	3	1	5	2	1	3	3	1	3	1	3	1	3	3	58
6030005	1	3	1	2	5	5	3	5	4	3	1	5	3	1	2	3	1	3	1	1	1	3	3	60
6030006	1	3	1	2	5	5	3	5	4	3	1	5	3	1	2	3	1	3	1	3	3	3	3	64
6040001	1	3	1	3	3	5	3	5	4	3	1	5	2	1	2	1	1	1	1	3	1	3	3	56
6040002	1	3	2	3	3	5	3	5	4	3	1	5	2	1	3	1	1	1	1	1	1	3	3	56
6040003	1	3	2	3	3	5	3	5	4	3	1	5	2	1	2	1	1	1	1	1	1	3	3	55

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
6040004	1	3	1	3	3	3	3	5	4	3	1	5	2	1	2	1	1	1	1	1	1	3	3	52
6040005	1	3	1	3	3	3	3	5	4	3	1	5	2	1	3	1	1	1	1	1	1	3	3	53
6040006	1	3	2	2	3	1	2	5	4	2	1	5	3	1	2	1	1	1	1	1	1	3	1	47
7010101	1	3	2	3	3	3	1	3	1	1	1	1	3	1	2	1	3	3	3	3	5	3	3	53
7010102	1	3	2	3	3	1	1	3	1	1	1	1	3	1	1	1	3	3	3	1	5	3	3	48
7010103	1	3	2	3	3	5	1	3	1	1	1	1	3	1	1	1	3	3	3	3	1	3	3	50
7010104	1	3	2	3	3	3	1	3	2	1	1	1	3	1	1	1	3	3	3	3	1	3	3	49
7010105	1	3	2	3	3	1	1	1	1	1	1	1	3	1	1	1	3	3	3	3	5	3	3	48
7010106	1	3	2	3	3	1	1	3	1	1	1	1	3	1	2	1	3	3	3	1	3	3	3	47
7010107	1	3	2	3	3	1	1	1	2	1	1	2	3	1	2	1	3	3	3	3	1	3	3	47
7010108	1	3	2	2	3	3	1	1	3	1	2	2	3	1	2	1	3	3	3	1	1	3	3	48
7010201	1	3	3	3	3	5	1	1	2	1	2	1	3	1	2	1	3	3	3	3	1	3	3	52
7010202	1	3	2	3	3	5	1	1	3	1	1	1	3	1	2	1	3	3	3	3	1	3	3	51
7010203	1	3	3	5	3	5	1	3	2	1	2	1	3	1	2	1	3	3	3	3	1	3	3	56
7010204	1	3	3	3	3	5	1	1	3	1	1	1	3	1	4	1	3	3	3	5	1	3	3	56
7010205	1	3	2	3	3	5	1	3	2	1	2	1	3	1	3	1	3	3	3	5	1	3	3	56
7010206	1	4	2	3	3	5	1	3	3	1	2	1	3	2	2	1	3	3	3	4	1	3	3	57
7010207	1	3	3	3	3	5	1	3	2	1	2	1	3	1	3	1	3	3	3	3	1	3	3	55

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
7020001	1	2	2	1	5	1	1	1	2	1	2	2	2	1	2	1	3	3	5	3	1	1	1	44
7020002	1	3	2	2	3	1	1	1	2	1	1	2	3	1	2	1	3	3	5	5	1	3	3	50
7020003	1	2	2	1	3	1	1	3	2	1	2	2	2	1	2	1	3	3	5	5	1	3	1	48
7020004	1	3	2	1	3	3	1	3	2	1	1	1	3	1	3	1	3	3	5	3	1	3	3	51
7020005	1	3	2	2	3	5	1	3	2	1	2	2	3	1	3	1	3	3	5	5	1	3	3	58
7020006	1	3	2	1	3	1	1	3	2	1	1	2	3	1	3	1	3	3	5	5	1	3	3	52
7020007	1	3	2	1	3	3	1	3	2	1	2	1	3	1	3	1	3	3	5	5	1	3	3	54
7020008	1	3	2	1	3	1	1	3	2	1	1	1	3	1	3	1	3	3	5	5	3	3	3	53
7020009	1	3	2	1	3	1	1	3	2	1	1	1	3	1	2	1	3	3	5	5	1	3	3	50
7020010	1	3	2	1	3	1	1	3	2	1	1	1	3	1	2	1	3	3	5	5	1	3	3	50
7020011	1	3	3	2	3	1	1	3	2	1	1	1	3	1	2	1	3	3	5	5	1	3	3	52
7020012	1	4	2	3	3	5	1	5	2	1	2	1	3	1	4	1	3	3	5	5	1	3	3	62
7030001	1	3	2	3	3	5	1	5	1	1	1	1	2	1	2	1	1	1	3	1	1	3	1	44
7030002	1	3	2	3	3	5	1	1	1	1	1	1	2	1	1	1	1	1	3	3	3	3	1	43
7030003	1	3	2	3	3	3	1	3	1	1	1	1	3	1	1	1	1	1	3	3	1	3	3	44
7030004	1	3	3	3	3	5	1	3	1	1	2	1	3	1	2	1	1	1	3	5	1	3	3	51
7030005	1	3	2	4	3	5	1	5	2	1	1	1	2	1	2	1	1	1	3	3	1	3	3	50
7040001	1	3	2	3	3	5	1	5	3	1	2	1	2	1	2	3	1	3	3	5	1	3	3	57
7040002	1	3	3	3	3	5	1	5	3	1	1	1	3	1	4	3	1	3	3	5	1	3	3	60
7040003	1	3	2	2	3	5	1	5	3	1	2	1	2	1	2	3	1	3	3	5	1	3	3	56
7040004	1	3	3	3	3	5	1	3	3	1	2	1	3	1	3	3	1	3	3	5	1	3	3	58

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
7040005	1	3	2	2	3	3	1	1	3	1	1	1	2	1	2	3	1	3	3	5	1	3	1	47
7040006	1	3	2	2	3	5	1	5	3	1	1	1	2	1	2	3	1	3	3	4	1	3	1	52
7040007	1	3	2	2	3	5	1	3	2	1	1	1	2	1	1	3	1	3	3	3	1	3	1	47
7040008	1	3	2	2	3	5	1	3	3	1	1	1	3	1	2	3	1	3	3	5	1	3	3	54
7050001	1	3	2	2	3	5	1	3	1	1	1	1	2	1	2	1	1	1	3	3	3	3	1	45
7050002	1	3	1	2	3	3	1	3	1	1	1	1	2	1	2	1	1	1	3	3	3	3	1	42
7050003	1	3	2	1	3	1	1	3	1	1	1	1	2	1	2	1	1	1	3	3	5	3	1	42
7050004	1	3	2	1	3	5	1	3	1	1	1	1	2	1	2	1	1	1	3	3	3	3	1	44
7050005	1	3	3	2	3	5	1	3	2	1	1	1	2	1	2	1	1	1	3	3	1	3	1	45
7050006	1	3	2	2	3	5	1	1	2	1	1	1	2	1	2	1	1	1	3	3	1	3	1	42
7050007	1	3	2	3	3	5	1	1	2	1	1	1	2	1	2	1	1	1	3	3	1	3	1	43
7060001	1	3	2	2	3	5	1	5	3	1	2	1	3	1	2	1	1	1	3	3	1	3	1	49
7060002	1	3	2	2	3	5	1	3	3	1	2	1	4	1	2	1	1	1	3	1	1	3	1	46
7060003	1	3	2	1	3	5	1	5	3	1	2	2	2	1	2	1	1	1	3	3	3	3	1	50
7060004	1	3	2	1	3	5	1	3	3	1	2	1	4	1	3	1	1	1	3	3	3	3	1	50
7060005	1	3	2	1	3	5	1	3	3	1	2	3	2	1	2	1	1	1	3	3	1	3	3	49
7060006	1	3	2	1	3	5	1	1	2	1	2	3	4	1	3	1	1	1	3	3	1	3	1	47
7070001	1	3	1	3	3	3	1	3	1	1	1	1	2	1	2	1	1	1	3	3	3	3	1	43

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
7070002	1	3	2	2	3	5	1	3	1	1	1	1	2	1	2	1	1	1	3	3	1	3	1	43
7070003	1	3	2	3	3	5	1	5	2	1	1	1	2	1	2	1	1	1	3	5	1	3	1	49
7070004	1	3	2	3	3	3	1	3	3	1	1	1	2	1	2	1	1	1	3	3	1	3	1	44
7070005	1	3	2	2	3	5	1	5	3	1	1	1	2	1	1	1	1	1	3	3	1	3	1	46
7070006	1	3	2	2	3	3	1	3	3	1	1	1	2	1	2	1	1	1	3	3	1	3	1	43
7080101	1	3	2	1	3	5	1	5	2	1	2	3	3	1	4	1	1	3	3	5	1	3	1	55
7080102	1	3	2	1	3	5	1	3	3	1	2	1	4	1	4	1	1	3	3	3	1	3	1	51
7080103	1	3	2	1	3	5	1	1	2	1	2	3	4	1	4	1	1	3	3	5	1	3	1	52
7080104	1	3	2	1	3	5	1	5	2	1	2	3	2	1	3	1	1	3	3	3	1	3	3	53
7080105	1	3	3	2	3	5	1	3	2	1	2	1	4	1	3	1	1	3	3	3	1	3	1	51
7080106	1	3	2	2	3	3	1	3	2	1	2	1	4	1	2	1	1	3	3	3	1	3	1	47
7080107	1	3	2	1	3	3	1	3	2	1	2	2	4	1	2	1	1	3	3	3	1	3	1	47
7080201	1	3	2	1	3	5	1	1	3	1	2	1	4	1	3	1	1	3	3	5	1	3	1	50
7080202	1	3	2	1	3	5	1	3	2	1	2	1	4	1	3	1	1	3	3	3	1	3	1	49
7080203	1	3	2	1	3	1	1	3	2	1	2	1	4	1	3	1	1	3	3	3	1	3	1	45
7080204	1	3	2	1	3	5	1	1	2	1	2	1	4	1	3	1	1	3	3	1	1	3	1	45
7080205	1	3	2	2	3	5	1	3	3	1	2	1	4	1	3	1	1	3	3	3	1	3	1	51
7080206	1	3	2	2	3	5	1	1	2	1	2	3	4	1	4	1	1	3	3	3	1	3	1	51
7080207	1	3	2	1	3	3	1	3	2	1	2	1	4	1	3	1	1	3	3	3	1	3	1	47
7080208	1	3	2	2	3	3	1	3	2	1	2	1	4	1	3	1	1	3	3	3	1	3	1	48
7080209	1	3	2	2	3	5	1	3	2	1	2	2	4	1	2	1	1	3	3	3	1	3	1	50

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
7090001	2	3	2	3	3	5	1	3	3	1	1	3	2	1	2	1	3	3	3	4	1	3	1	54
7090002	1	3	2	3	3	5	1	1	3	1	1	2	2	1	2	1	3	3	3	5	1	3	1	51
7090003	1	3	2	2	3	5	1	3	3	1	1	3	2	1	2	1	3	3	3	5	1	3	3	55
7090004	1	3	2	3	3	5	1	3	3	1	1	3	2	1	2	1	3	3	3	3	1	3	1	52
7090005	1	3	2	2	3	5	2	3	2	1	2	3	1	1	2	1	3	3	3	3	1	3	5	55
7090006	3	4	2	4	3	5	2	3	3	1	1	3	1	1	2	1	3	3	3	3	1	3	3	58
7090007	1	3	2	1	3	5	2	3	2	1	1	3	1	1	3	1	3	3	3	3	1	3	5	54
7100001	1	3	2	1	3	1	1	3	2	1	1	1	3	1	4	1	1	3	3	5	1	3	3	48
7100002	1	3	2	1	3	1	1	3	2	1	2	1	4	1	3	1	1	3	3	3	1	3	1	45
7100003	1	3	2	1	3	1	1	3	2	1	2	1	4	1	2	1	1	3	3	3	1	3	1	44
7100004	1	3	3	2	3	5	1	3	2	1	2	1	4	1	4	1	1	3	3	1	1	3	1	50
7100005	1	3	2	1	3	1	1	1	2	1	2	1	4	1	3	1	1	3	3	3	1	3	1	43
7100006	1	3	2	1	3	5	1	3	2	1	2	1	4	1	3	1	1	3	3	3	1	3	1	49
7100007	1	3	2	2	3	5	1	3	2	1	2	1	4	1	3	1	1	3	3	3	1	3	1	50
7100008	1	3	2	2	3	5	1	1	2	1	2	1	4	1	3	1	1	3	3	3	1	3	1	48
7100009	1	3	2	1	3	3	1	3	2	1	2	2	4	1	2	1	1	3	3	3	1	3	1	47
7110001	1	3	2	1	3	1	1	3	2	1	2	3	2	1	3	1	1	3	3	3	1	3	3	47
7110002	1	3	2	1	3	1	1	3	2	1	2	3	2	1	2	1	1	3	3	3	1	3	3	46

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
7110003	1	3	2	1	3	1	1	3	2	1	1	3	2	1	2	1	1	3	3	3	1	3	5	47
7110004	1	3	2	2	3	5	1	5	2	1	2	4	2	1	2	1	1	3	3	4	1	3	5	57
7110005	1	3	2	1	3	3	1	3	2	1	1	3	2	1	1	1	1	3	3	5	3	3	5	52
7110006	1	3	2	2	3	5	1	3	2	1	1	3	2	1	2	1	1	3	3	5	1	3	5	54
7110007	1	3	2	3	3	3	1	3	2	1	2	4	2	1	2	1	1	3	3	3	1	3	5	53
7110008	1	3	3	3	3	5	1	1	2	1	1	5	2	1	2	1	1	3	3	3	1	3	5	54
7110009	1	4	2	3	3	5	1	5	2	1	2	5	2	1	3	1	1	3	3	4	1	3	5	61
7120001	2	4	2	3	5	5	2	5	2	1	1	3	2	1	2	5	3	5	3	3	1	3	3	66
7120002	1	3	2	2	3	3	2	3	2	1	1	3	2	1	2	5	3	5	3	1	1	3	3	55
7120003	4	5	2	3	3	5	2	1	1	1	1	3	2	1	1	5	3	5	3	5	1	3	3	63
7120004	4	5	3	3	3	5	1	3	1	1	1	4	1	1	2	5	3	5	3	5	1	3	3	66
7120005	3	3	3	3	3	5	2	1	2	1	1	4	1	1	2	5	3	5	3	1	1	3	5	61
7120006	4	4	2	3	3	5	1	3	3	1	2	3	2	1	2	5	3	5	3	3	1	3	3	65
7120007	3	4	3	3	3	5	2	1	2	1	1	4	1	1	1	5	3	5	3	3	1	3	5	63
7130001	1	3	2	2	3	5	2	3	2	1	1	3	1	1	3	3	1	3	3	3	1	3	5	55
7130002	1	3	2	1	3	3	2	1	2	1	1	3	1	1	3	3	1	3	3	3	1	3	5	50
7130003	1	3	2	1	3	5	2	3	2	1	2	3	1	1	4	3	1	3	3	3	1	3	5	56
7130004	1	3	2	2	3	5	2	1	2	1	1	3	1	1	4	3	1	3	3	1	1	3	5	52
7130005	1	3	2	1	3	5	2	3	2	1	1	3	1	1	4	3	1	3	3	3	1	3	5	55
7130006	1	3	2	2	3	5	2	1	2	1	1	4	1	1	4	3	1	3	3	5	1	3	5	57
7130007	1	3	2	1	3	5	2	1	2	1	1	5	1	1	3	3	1	3	3	5	1	3	5	56

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
7130008	1	3	2	2	3	5	2	3	2	1	1	4	1	1	3	3	1	3	3	3	1	3	5	56
7130009	1	3	2	2	3	5	2	1	2	1	1	4	1	1	4	3	1	3	3	3	1	3	5	55
7130010	1	3	2	1	3	1	2	1	2	1	1	3	1	1	3	3	1	3	3	3	1	3	5	48
7130011	1	3	2	1	3	5	2	3	2	1	2	4	1	1	3	3	1	3	3	3	1	3	5	56
7130012	1	3	2	2	3	5	2	1	2	1	1	5	1	1	2	3	1	3	3	5	1	3	5	56
7140101	1	4	2	2	3	5	1	3	3	2	2	5	2	1	3	3	1	5	3	3	1	3	5	63
7140102	1	3	2	3	3	5	1	5	3	2	1	5	2	1	2	3	1	5	3	1	1	3	5	61
7140103	1	3	2	3	3	5	1	3	3	2	1	5	2	1	2	3	1	5	3	3	1	3	5	61
7140104	1	3	2	3	3	5	1	3	3	2	1	5	2	1	2	3	1	5	3	1	1	3	5	59
7140105	1	3	2	2	3	3	1	5	3	2	2	5	2	1	3	3	1	5	3	3	1	3	5	62
7140106	1	3	2	2	3	3	2	3	4	3	1	5	1	1	3	3	1	5	3	5	1	3	5	63
7140107	1	3	2	3	3	1	1	5	3	2	1	5	2	1	2	3	1	5	3	3	1	3	5	59
7140108	1	3	2	1	3	1	2	3	4	2	2	5	1	2	2	3	1	5	3	5	1	3	5	60
7140201	1	3	2	2	3	5	2	1	3	2	1	5	1	1	4	3	1	5	3	3	1	3	5	60
7140202	1	3	2	2	3	5	2	3	4	3	1	5	1	1	3	3	1	5	3	5	1	3	5	65
7140203	1	3	1	2	3	5	2	1	4	3	1	5	1	1	4	3	1	5	3	3	1	3	5	61
7140204	1	3	2	2	3	5	2	1	4	3	2	5	1	1	3	3	1	5	3	5	1	3	5	64
8010100	1	3	2	2	3	5	2	5	3	1	1	5	2	1	3	1	3	3	3	5	1	3	3	61

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
8010201	1	3	2	2	3	1	2	5	4	2	2	5	3	1	1	1	3	3	3	1	1	3	1	53
8010202	1	3	2	2	3	3	3	3	4	2	1	5	2	1	2	1	3	3	3	3	1	3	3	57
8010203	1	3	2	2	3	3	3	1	4	2	1	5	2	1	2	1	3	3	3	3	1	3	3	55
8010204	1	3	2	2	3	5	3	3	4	2	1	5	2	1	3	1	3	3	3	3	1	3	3	60
8010205	1	3	2	3	3	5	3	1	4	2	1	5	2	1	3	1	3	3	3	3	1	3	3	59
8010206	1	3	2	2	3	3	3	3	3	2	1	5	2	1	3	1	3	3	3	5	1	3	3	59
8010207	1	3	2	2	3	5	2	3	4	2	1	5	2	1	2	1	3	3	3	5	3	3	1	60
8010208	1	3	2	3	3	5	3	3	4	2	1	5	2	1	3	1	3	3	3	3	1	3	3	61
8010209	1	4	3	3	3	5	3	3	4	2	1	5	2	1	3	1	3	3	3	3	1	3	3	63
8010210	1	4	3	3	3	5	3	3	4	2	1	5	2	1	3	1	3	3	3	4	1	3	3	64
8010211	1	4	2	3	3	5	3	3	4	2	1	5	2	1	3	1	3	3	3	3	1	3	3	62
8020100	1	3	2	1	3	5	2	1	3	1	1	5	2	1	2	3	5	3	3	3	1	3	1	55
8020201	1	3	3	1	3	1	1	3	3	1	1	5	2	1	3	3	5	3	3	5	1	3	5	60
8020202	1	3	2	2	3	3	1	5	3	2	1	5	2	1	2	3	5	3	3	1	1	3	5	60
8020203	1	3	2	2	3	5	2	5	3	1	1	5	2	1	3	3	5	3	3	3	1	3	1	61
8020204	1	3	2	1	3	5	1	3	3	1	1	5	2	1	3	3	5	3	3	5	1	3	3	61
8020205	1	3	2	1	3	5	2	3	3	1	1	5	2	1	3	3	5	3	3	5	1	3	1	60
8020301	1	3	1	3	3	5	2	3	3	2	1	5	2	1	4	3	5	3	3	3	1	3	1	61
8020302	1	3	2	1	3	5	2	3	3	1	1	5	2	1	4	3	5	3	3	5	1	3	1	61
8020303	1	3	2	1	3	5	2	3	3	1	1	5	2	1	2	3	5	3	3	3	1	3	1	57
8020304	1	3	1	1	3	3	2	3	3	1	1	5	2	1	2	3	5	3	3	3	1	3	1	54

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
8020401	1	3	2	2	3	5	2	1	3	1	1	5	2	1	3	3	5	3	3	3	1	3	1	57
8020402	1	3	2	3	3	5	2	1	3	2	1	5	2	1	4	3	5	3	3	5	1	3	1	62
8030100	1	3	2	1	3	3	2	3	3	1	1	5	2	1	3	1	5	3	3	3	1	3	1	54
8030201	1	3	2	3	3	3	2	5	4	2	1	5	2	1	2	1	5	3	3	3	1	3	1	59
8030202	1	3	2	1	3	3	2	3	3	2	1	5	2	1	2	1	5	3	3	5	1	3	1	56
8030203	1	3	2	3	3	1	2	1	4	2	1	5	2	1	2	1	5	3	3	5	1	3	1	55
8030204	1	3	2	3	3	5	2	1	4	2	1	5	2	1	2	1	5	3	3	3	1	3	1	57
8030205	1	3	2	2	3	1	2	3	4	2	1	5	2	1	2	1	5	3	3	3	1	3	1	54
8030206	1	3	2	2	3	3	2	3	3	2	1	4	2	1	3	1	5	3	3	5	1	3	1	57
8030207	1	3	2	1	3	3	2	5	3	1	1	5	2	1	3	1	5	3	3	3	1	3	1	56
8030208	1	3	2	2	3	3	2	1	3	2	1	4	2	1	3	1	5	3	3	5	1	3	1	55
8030209	1	3	1	1	3	3	2	3	3	1	1	5	2	1	3	1	5	3	3	3	1	3	1	53
8040101	1	3	1	3	3	3	2	5	4	3	1	4	2	1	2	1	1	3	3	1	1	3	1	52
8040102	1	3	1	2	3	5	2	5	3	2	1	5	2	1	3	1	1	3	3	3	1	3	1	55
8040103	1	3	1	2	3	3	2	3	3	2	1	4	2	1	2	1	1	3	3	1	1	3	1	47
8040201	1	3	2	1	3	3	2	3	3	2	1	4	2	1	2	1	1	3	3	5	3	3	1	53
8040202	1	3	2	1	3	5	2	3	3	2	1	4	3	1	2	1	1	3	3	5	1	3	1	54
8040203	1	3	1	3	3	5	2	5	3	2	1	5	2	1	3	1	1	3	3	3	1	3	1	56

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
8040204	1	3	2	2	3	5	2	3	3	2	1	5	2	1	2	1	1	3	3	5	3	3	1	57
8040205	1	3	2	1	3	5	2	5	3	1	1	5	2	1	2	1	1	3	3	3	1	3	1	53
8040206	1	3	2	1	5	5	2	1	3	2	1	4	3	1	3	1	1	3	3	3	1	3	3	55
8040207	1	3	2	1	5	5	2	3	3	2	2	3	3	1	3	1	1	3	3	1	1	3	3	55
8040301	1	3	2	2	5	5	2	5	3	1	1	3	3	1	2	1	1	3	3	1	1	3	3	55
8040302	1	3	2	1	5	5	2	1	3	2	1	3	3	1	2	1	1	3	3	3	1	3	3	53
8040303	1	3	1	1	5	3	2	3	3	2	1	3	3	1	2	1	1	3	3	3	1	3	3	52
8040304	1	3	3	2	5	5	2	1	3	2	2	3	3	1	2	1	1	3	3	3	1	3	3	56
8040305	1	3	2	1	5	3	2	3	3	1	2	3	3	1	3	1	1	3	3	3	3	3	3	56
8040306	1	3	2	1	5	3	2	3	3	1	1	3	3	1	3	1	1	3	3	3	3	3	3	55
8050001	1	3	2	1	5	5	2	1	3	1	1	4	3	1	2	1	1	3	3	3	1	3	3	53
8050002	1	3	2	1	3	3	2	1	3	1	1	5	3	1	3	1	1	3	3	3	1	3	1	49
8050003	1	3	1	1	5	3	2	3	3	1	1	3	3	1	4	1	1	3	3	5	1	3	3	55
8060100	1	3	2	1	5	3	2	5	3	1	1	3	3	1	3	1	1	3	3	3	1	3	1	53
8060201	1	3	2	2	3	5	2	1	4	2	1	4	2	1	2	1	1	3	3	5	1	3	1	53
8060202	1	3	2	3	3	5	2	5	4	2	1	4	2	1	3	1	1	3	3	5	1	3	1	59
8060203	1	3	2	2	3	5	2	3	4	3	1	3	2	1	3	1	1	3	3	5	1	3	1	56
8060204	1	3	1	2	3	1	2	3	4	2	1	3	2	1	2	1	1	3	3	5	3	3	1	51
8060205	1	3	2	2	3	3	2	3	4	3	1	3	2	1	2	1	1	3	3	5	1	3	1	53
8060206	1	3	4	2	3	1	2	3	4	2	1	3	2	1	2	1	1	3	3	3	3	3	1	52
8070100	2	3	2	2	5	5	2	1	3	1	2	3	3	2	2	3	3	5	3	5	1	3	3	64

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
8070201	2	3	3	3	5	5	2	3	4	2	1	3	3	1	2	3	3	5	3	5	1	3	3	68
8070202	3	3	2	3	5	5	2	5	4	3	2	3	3	1	2	3	3	5	3	5	1	3	3	72
8070203	3	3	2	3	5	5	2	3	4	3	1	3	3	1	2	3	3	5	3	5	1	3	3	69
8070204	3	3	2	3	5	3	2	3	3	1	2	3	3	2	2	3	3	5	3	5	1	3	3	66
8070205	1	3	2	3	5	3	2	5	4	3	1	3	3	1	4	3	3	5	3	3	1	3	3	67
8070300	2	3	2	2	5	5	2	1	3	1	2	3	3	1	2	3	3	5	3	5	1	3	3	63
8080101	1	3	2	2	5	5	2	3	3	1	1	3	3	1	2	1	5	5	3	1	1	3	3	59
8080102	1	3	3	2	5	5	2	5	3	1	1	3	3	1	3	1	5	5	3	5	1	3	3	67
8080103	1	3	1	2	5	5	2	1	3	1	2	3	3	1	4	1	5	5	3	2	1	3	3	60
8080201	1	3	2	2	5	5	2	3	3	2	1	3	3	1	4	1	5	5	3	5	1	3	3	66
8080202	1	3	2	2	5	5	2	3	3	2	1	3	3	1	3	1	5	5	3	3	1	3	3	63
8080203	1	3	3	2	5	5	2	3	3	2	1	3	3	1	3	1	5	5	3	3	1	3	3	64
8080204	1	3	4	1	5	5	2	5	3	2	1	3	3	1	3	1	5	5	3	3	1	3	3	66
8080205	1	3	2	2	5	5	2	3	3	2	1	3	3	1	4	1	5	5	3	3	1	3	3	64
8080206	1	3	1	2	5	5	2	3	3	2	1	3	3	1	3	1	5	5	3	5	1	3	3	64
8090100	1	3	1	2	5	5	2	3	3	2	1	3	3	1	2	3	1	5	3	1	1	3	3	57
8090201	1	3	1	4	5	5	2	5	4	3	1	3	3	1	4	3	1	5	3	5	1	3	3	69
8090202	1	3	1	1	5	5	2	3	3	1	1	3	3	1	1	3	1	5	3	5	1	3	3	58

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
8090203	1	4	1	2	5	5	2	5	3	2	1	3	3	1	2	3	1	5	3	1	1	3	3	60
8090301	1	4	1	2	5	5	2	3	3	2	1	3	3	1	3	3	1	5	3	3	1	3	3	61
8090302	1	3	1	2	5	5	2	3	3	2	1	3	3	1	2	3	1	5	3	3	1	3	3	59
9010001	1	2	2	1	5	1	1	1	1	3	2	3	4	1	2	3	5	1	5	3	5	1	1	54
9010002	1	3	2	1	5	1	1	1	1	3	1	1	4	1	2	3	5	1	5	3	5	1	1	52
9010003	1	1	2	1	5	1	1	3	2	3	1	1	4	1	2	3	5	1	5	3	5	1	1	53
9010004	1	2	2	1	5	1	1	1	2	3	2	1	4	1	2	3	5	1	5	3	5	1	1	53
9010005	1	2	2	1	5	1	1	1	1	3	2	1	4	1	3	3	5	1	5	3	5	1	1	53
9020101	1	2	2	1	3	1	1	1	2	1	2	2	3	1	2	1	3	3	5	5	1	3	1	47
9020102	1	2	2	1	3	1	1	3	2	1	2	2	3	1	2	1	3	3	5	5	1	3	3	51
9020103	1	3	3	3	3	5	1	1	2	1	1	2	3	1	2	1	3	3	5	3	1	3	3	54
9020104	1	3	2	1	3	5	1	3	2	1	2	1	3	1	2	1	3	3	5	5	1	3	3	55
9020105	1	2	1	1	5	5	1	1	2	1	2	1	4	1	2	1	3	3	5	3	1	1	1	48
9020106	1	3	3	2	3	5	1	1	2	1	2	1	3	1	2	1	3	3	5	5	1	3	3	55
9020107	1	3	2	2	5	5	1	3	2	1	2	1	4	1	2	1	3	3	5	5	1	1	1	55
9020108	1	3	2	1	3	5	1	3	2	1	2	1	3	1	2	1	3	3	5	3	1	3	3	53
9020109	1	3	1	1	5	5	1	3	2	1	2	1	4	1	2	1	3	3	5	3	1	1	1	51
9020201	1	2	2	1	5	3	1	3	2	3	2	1	4	1	2	1	3	3	5	3	3	1	1	53
9020202	1	1	2	1	5	3	1	1	2	1	2	1	4	1	2	1	3	3	5	5	3	1	1	50
9020203	1	1	2	1	5	3	1	1	2	1	2	1	4	1	3	1	3	3	5	3	1	1	1	47
9020204	1	3	2	1	5	5	1	1	2	1	2	1	4	1	2	1	3	3	5	3	1	1	1	50

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
9020205	1	3	2	2	5	5	1	3	2	1	2	1	4	1	2	1	3	3	5	5	1	1	1	55
9020301	1	3	1	1	3	5	1	1	2	1	2	1	4	1	2	1	3	3	5	3	1	3	1	49
9020302	1	3	2	3	3	3	1	3	1	1	1	1	3	1	2	1	3	3	5	3	5	3	3	55
9020303	1	3	2	1	3	5	1	1	2	1	2	1	3	1	2	1	3	3	5	3	1	3	3	51
9020304	1	2	2	2	3	3	1	1	1	1	1	1	3	1	2	1	3	3	5	3	3	3	3	49
9020305	1	3	2	1	3	5	1	1	2	1	2	1	3	1	3	1	3	3	5	3	3	3	3	54
9020306	1	3	2	1	3	5	1	1	2	1	1	1	3	1	2	1	3	3	5	3	1	3	3	50
9020307	1	3	1	1	5	5	1	1	2	1	2	1	4	1	2	1	3	3	5	3	1	1	1	49
9020308	1	3	1	1	5	5	1	3	2	3	2	1	4	1	2	1	3	3	5	3	1	1	1	53
9020309	1	2	2	1	3	5	1	3	2	1	2	1	3	1	2	1	3	3	5	3	1	3	3	52
9020310	1	2	2	1	5	3	1	3	1	3	2	1	4	1	2	1	3	3	5	3	1	1	1	50
9020311	1	1	2	1	3	3	1	1	2	3	2	1	3	1	2	1	3	3	5	3	1	3	1	47
9020312	1	2	1	1	3	1	1	1	2	1	2	1	3	1	2	1	3	3	5	5	1	3	3	47
9020313	1	1	2	1	5	1	1	3	1	3	2	1	4	1	1	1	3	3	5	3	1	1	1	46
9020314	1	2	1	2	3	1	1	3	1	1	2	1	3	1	3	1	3	3	5	5	3	3	3	52
9030001	1	3	2	2	3	5	1	3	1	1	1	1	3	1	1	1	1	1	3	3	3	3	3	47
9030002	1	3	2	1	3	5	1	3	1	1	1	1	3	1	1	1	1	1	3	1	5	3	3	46
9030003	1	3	2	1	3	5	1	3	1	1	1	1	3	1	1	1	1	1	3	3	5	3	3	48

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
9030004	1	2	2	1	3	3	1	1	1	1	1	1	3	1	1	1	1	1	3	3	5	3	3	43
9030005	1	3	2	1	3	5	1	3	1	1	1	1	3	1	1	1	1	1	3	3	5	3	3	48
9030007	1	1	2	2	3	1	1	1	1	1	1	1	3	1	1	1	1	1	3	3	5	3	3	41
9030008	1	1	1	2	3	1	1	1	1	1	1	1	3	1	1	1	1	1	3	3	5	3	3	40
9030009	1	1	1	2	3	1	1	3	1	1	1	1	3	1	2	1	1	1	3	5	5	3	3	45
10010001	1	1	1	2	5	1	1	1	1	1	1	5	1	1	1	1	1	3	3	3	5	1	1	42
10010002	1	1	1	2	5	1	1	3	1	1	1	5	1	1	1	1	1	3	3	3	5	1	1	44
10020001	1	1	1	2	5	1	1	3	2	2	1	5	1	1	1	3	1	3	3	3	1	1	1	44
10020002	1	1	1	2	5	1	1	1	2	2	1	5	1	1	1	3	1	3	3	3	1	1	1	42
10020003	1	1	1	3	5	1	1	3	2	2	1	5	1	1	1	3	1	3	3	5	1	1	1	47
10020004	1	2	1	1	5	1	1	3	2	2	1	5	1	1	1	3	1	3	3	5	1	1	1	46
10020005	1	2	1	3	5	1	1	3	2	2	1	5	1	1	1	3	1	3	3	3	1	1	1	46
10020006	1	2	1	3	5	1	1	3	2	2	1	5	1	1	1	3	1	3	3	3	1	1	1	46
10020007	1	2	1	3	5	1	1	3	3	2	1	5	1	1	1	3	1	3	3	5	1	1	1	49
10020008	1	3	2	4	5	1	1	1	3	2	1	5	1	1	1	3	1	3	3	1	1	1	1	46
10030101	1	2	1	3	5	5	1	3	2	2	1	5	1	1	1	5	1	1	5	5	1	1	1	54
10030102	1	3	1	2	5	5	1	1	1	1	1	5	1	1	1	5	1	1	5	5	1	1	1	50
10030103	1	2	2	2	5	5	1	1	2	2	1	5	1	1	1	5	1	1	5	3	1	1	1	50
10030104	2	3	2	2	5	5	1	3	1	1	1	5	1	1	1	5	1	1	5	3	1	1	1	52
10030105	1	3	1	1	5	5	1	1	1	1	1	4	1	1	1	5	1	1	5	3	1	1	1	46
10030201	1	1	1	2	5	1	1	3	1	1	1	5	1	1	1	5	1	1	5	3	1	1	1	44

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
10030202	1	1	1	2	5	1	1	1	1	1	1	5	1	1	1	5	1	1	5	3	1	1	1	42
10030203	1	1	1	1	5	3	1	3	1	1	1	5	1	1	1	5	1	1	5	5	1	1	1	47
10030204	1	1	2	1	5	1	1	3	1	1	1	5	1	1	1	5	1	1	5	3	1	1	1	44
10030205	1	1	2	1	5	3	1	3	1	1	1	5	1	1	1	5	1	1	5	5	1	1	1	48
10040101	1	1	1	1	5	1	1	3	1	1	1	3	1	1	1	3	1	3	5	3	5	1	1	45
10040102	1	1	1	1	5	5	1	3	1	1	1	3	1	1	1	3	1	3	5	5	3	1	1	49
10040103	1	1	1	1	5	5	1	1	1	2	1	3	1	1	2	3	1	3	5	3	3	1	1	47
10040104	1	1	1	1	5	1	1	3	1	1	1	3	1	1	1	3	1	3	5	5	3	1	1	45
10040105	1	1	2	1	5	1	1	3	1	1	1	3	1	1	1	3	1	3	5	5	3	1	1	46
10040106	1	1	2	1	5	1	1	3	1	1	1	3	1	1	1	3	1	3	5	5	3	1	1	46
10040201	1	1	1	2	5	5	1	1	1	1	1	4	1	1	1	3	1	3	5	3	1	1	1	45
10040202	2	1	1	2	5	5	1	3	1	1	1	2	1	1	1	3	1	3	5	5	3	1	1	50
10040203	1	1	2	1	5	1	1	3	1	1	1	2	1	1	2	3	1	3	5	3	5	1	1	46
10040204	1	1	2	1	5	1	1	3	1	2	1	3	1	1	2	3	1	3	5	3	5	1	1	48
10040205	1	1	2	1	5	1	1	3	1	1	1	3	1	1	1	3	1	3	5	3	3	1	1	44
10050001	1	1	1	2	5	1	1	3	1	1	1	5	1	1	1	5	1	3	5	3	3	1	1	48
10050002	1	1	2	1	5	1	1	3	1	1	1	3	1	1	1	5	1	3	5	3	1	1	1	44
10050003	1	1	2	1	5	1	1	3	1	1	1	3	1	1	1	5	1	3	5	3	5	1	1	48

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
10050004	1	1	1	1	5	1	1	1	1	1	1	3	1	1	1	5	1	3	5	5	5	1	1	47
10050005	1	1	1	1	5	1	1	3	1	1	1	3	1	1	1	5	1	3	5	3	5	1	1	47
10050006	1	1	1	1	5	1	1	3	1	1	1	3	1	1	1	5	1	3	5	5	3	1	1	47
10050007	1	1	1	1	5	1	1	3	1	1	1	2	1	1	1	5	1	3	5	3	5	1	1	46
10050008	1	1	1	1	5	1	1	3	1	1	1	2	1	1	1	5	1	3	5	3	5	1	1	46
10050009	1	1	1	1	5	1	1	3	1	1	1	3	1	1	1	5	1	3	5	5	5	1	1	49
10050010	1	1	1	1	5	1	1	3	1	1	1	2	1	1	1	5	1	3	5	5	5	1	1	48
10050011	1	1	1	1	5	1	1	3	1	1	1	3	1	1	1	5	1	3	5	5	5	1	1	49
10050012	1	1	1	1	5	1	1	3	1	1	1	4	1	1	1	5	1	3	5	3	5	1	1	48
10050013	1	1	1	1	5	1	1	3	1	1	1	3	1	1	1	5	1	3	5	5	5	1	1	49
10050014	1	1	1	1	5	1	1	1	1	1	1	3	1	1	1	5	1	3	5	5	5	1	1	47
10050015	1	1	1	1	5	1	1	3	1	1	1	3	1	1	1	5	1	3	5	5	5	1	1	49
10050016	1	1	1	1	5	1	1	3	1	1	1	3	1	1	1	5	1	3	5	5	5	1	1	49
10060001	1	1	1	1	5	1	1	1	1	1	1	4	1	1	1	3	3	3	5	5	5	1	1	48
10060002	1	1	1	1	5	1	1	3	1	1	1	3	1	1	1	3	3	3	5	3	3	1	1	45
10060003	1	1	1	1	5	1	1	3	1	1	1	4	1	1	1	3	3	3	5	5	5	1	1	50
10060004	1	1	1	1	5	1	1	3	1	1	1	3	1	1	1	3	3	3	5	3	5	1	1	47
10060005	1	1	2	1	5	1	1	3	1	1	1	3	1	1	1	3	3	3	5	5	3	1	1	48
10060006	1	1	1	1	5	1	1	3	1	1	1	4	1	1	1	3	3	3	5	3	5	1	1	48
10060007	1	1	2	1	5	1	1	1	1	1	1	4	3	1	1	3	3	3	5	5	5	1	1	51
10070001	1	1	1	3	5	1	1	3	3	3	1	5	1	1	1	3	1	3	3	3	3	1	1	49

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
10070002	1	1	2	3	5	1	1	3	2	2	1	5	1	1	1	3	1	3	3	3	1	1	1	46
10070003	1	2	1	2	5	1	1	3	2	2	1	5	1	1	1	3	1	3	3	3	1	1	1	45
10070004	1	3	2	3	5	5	1	1	1	1	1	3	1	1	1	3	1	3	3	5	1	1	1	48
10070005	1	1	2	3	5	3	1	3	3	2	1	5	1	1	1	3	1	3	3	3	1	1	1	49
10070006	1	1	1	3	5	5	1	3	3	2	1	5	1	1	1	3	1	3	3	3	1	1	1	50
10070007	2	3	1	3	5	5	1	1	1	1	1	3	1	1	1	3	1	3	3	5	1	1	1	48
10070008	2	3	1	3	5	5	1	3	1	1	1	3	1	1	1	3	1	3	3	5	1	1	1	50
10080001	1	1	2	2	5	1	1	1	3	2	1	5	1	1	1	5	1	3	3	3	5	1	1	50
10080002	1	1	2	2	5	1	1	3	3	2	1	5	1	1	1	5	1	3	3	3	5	1	1	52
10080003	1	1	2	2	5	1	1	1	3	2	1	5	1	1	1	5	1	3	3	5	5	1	1	52
10080004	1	1	2	2	5	5	1	3	3	2	1	5	1	1	1	5	1	3	3	3	5	1	1	56
10080005	1	1	2	2	5	5	1	1	3	2	1	5	1	1	1	5	1	3	3	5	3	1	1	54
10080006	1	2	2	2	5	5	1	1	3	2	1	5	1	1	1	5	1	3	3	3	3	1	1	53
10080007	1	1	1	1	5	3	1	3	3	2	1	5	1	1	1	5	1	3	3	5	3	1	1	52
10080008	1	1	1	1	5	5	1	1	3	2	1	5	1	1	1	5	1	3	3	3	1	1	1	48
10080009	1	1	1	2	5	1	1	3	3	2	1	5	1	1	1	5	1	3	3	1	5	1	1	49
10080010	1	1	1	2	5	3	1	3	3	3	1	4	1	1	1	5	1	3	3	1	3	1	1	49
10080011	1	1	1	2	5	1	1	3	3	2	1	4	1	1	1	5	1	3	3	3	5	1	1	50

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
10080012	1	1	1	2	5	1	1	1	3	3	1	5	1	1	1	5	1	3	3	3	5	1	1	50
10080013	1	1	1	2	5	1	1	1	3	3	1	5	1	1	1	5	1	3	3	3	5	1	1	50
10080014	1	1	1	2	5	3	1	3	3	2	1	4	1	1	1	5	1	3	3	1	3	1	1	48
10080015	1	1	1	2	5	5	1	1	1	1	1	3	1	1	1	5	1	3	3	3	1	1	1	44
10080016	2	1	1	3	5	3	1	3	1	2	1	3	1	1	1	5	1	3	3	3	1	1	1	47
10090101	3	2	1	2	5	1	1	3	1	1	1	4	1	1	1	5	1	1	5	5	1	1	1	48
10090102	2	1	2	1	5	1	1	3	1	1	1	3	1	1	1	5	1	1	5	5	1	1	1	45
10090201	1	1	2	3	5	5	1	1	3	2	1	5	1	1	1	5	1	1	5	3	1	1	1	51
10090202	1	1	3	3	5	5	1	3	1	1	1	5	1	1	1	5	1	1	5	5	1	1	1	53
10090203	1	2	2	2	5	5	1	3	1	1	1	5	1	1	1	5	1	1	5	3	1	1	1	50
10090204	1	2	2	3	5	5	1	3	1	1	1	5	1	1	1	5	1	1	5	5	1	1	1	53
10090205	1	1	3	3	5	1	1	1	1	1	1	5	1	1	1	5	1	1	5	3	1	1	1	45
10090206	2	1	2	3	5	1	1	1	2	2	1	5	1	1	1	5	1	1	5	3	1	1	1	47
10090207	1	1	2	1	5	1	1	3	1	1	1	4	1	1	1	5	1	1	5	5	3	1	1	47
10090208	1	1	3	3	5	1	1	3	1	1	1	4	1	1	2	5	1	1	5	5	1	1	1	49
10090209	1	1	1	1	5	1	1	1	1	1	1	3	1	1	1	5	1	1	5	5	1	1	1	41
10090210	1	1	1	1	5	1	1	3	1	1	1	3	1	1	1	5	1	1	5	5	3	1	1	45
10100001	2	1	2	1	5	5	1	1	1	1	1	3	1	1	1	5	1	1	5	5	1	1	1	47
10100002	3	1	3	1	5	3	1	3	1	1	1	2	1	1	1	5	1	1	5	5	1	1	1	48
10100003	3	1	2	1	5	1	1	3	1	1	1	3	1	1	1	5	1	1	5	5	1	1	1	46
10100004	1	1	2	1	5	1	1	3	1	1	1	3	1	1	1	5	1	1	5	3	1	1	1	42

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
10100005	1	1	1	1	5	1	1	3	1	1	1	2	1	1	1	5	1	1	5	5	1	1	1	42
10110101	1	2	2	1	5	3	1	3	1	3	1	1	4	1	2	1	1	3	5	5	3	1	1	51
10110102	1	2	2	1	5	1	1	1	1	1	1	3	4	1	2	1	1	3	5	3	5	1	1	47
10110201	1	1	1	1	5	1	1	1	1	1	1	3	1	1	1	1	1	3	5	3	1	1	1	37
10110202	1	1	1	1	5	1	1	1	1	1	1	2	1	1	1	1	1	3	5	3	5	1	1	40
10110203	1	1	2	1	5	1	1	3	1	1	1	1	4	1	1	1	1	3	5	3	1	1	1	41
10110204	1	1	1	1	5	1	1	1	1	1	1	2	2	1	1	1	1	3	5	3	1	1	1	37
10110205	1	1	2	1	5	1	1	3	1	1	1	1	4	1	1	1	1	3	5	5	3	1	1	45
10120101	1	1	2	3	5	5	1	3	1	1	1	5	1	1	2	3	3	1	5	3	1	1	1	51
10120102	1	1	1	2	5	3	1	3	1	1	1	5	1	1	1	3	3	1	5	3	1	1	1	46
10120103	1	1	2	2	5	1	1	3	1	1	1	4	1	1	2	3	3	1	5	5	1	1	1	47
10120104	1	1	1	1	5	1	1	3	1	1	1	4	1	1	2	3	3	1	5	3	1	1	1	43
10120105	1	1	1	2	5	1	1	3	1	1	1	5	1	1	1	3	3	1	5	5	1	1	1	46
10120106	1	1	1	1	5	3	1	1	1	1	1	3	1	1	2	3	3	1	5	3	3	1	1	44
10120107	1	1	2	2	5	5	1	3	2	1	1	3	1	1	2	3	3	1	5	3	1	1	1	49
10120108	1	1	1	1	5	1	1	3	1	1	1	3	2	1	2	3	3	1	5	5	3	1	1	47
10120109	1	2	2	3	5	5	1	1	2	1	1	3	1	1	2	3	3	1	5	3	1	1	1	49
10120110	1	3	3	2	5	5	1	1	2	1	1	3	1	1	2	3	3	1	5	3	1	1	1	50

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
10120111	1	3	2	2	5	5	1	3	1	1	1	3	1	1	2	3	3	1	5	3	1	1	1	50
10120112	1	2	1	1	5	5	1	3	1	1	1	2	1	1	2	3	3	1	5	5	1	1	1	48
10120113	1	1	1	2	5	3	1	1	1	1	1	2	1	1	2	3	3	1	5	5	3	1	1	46
10120201	1	1	2	3	5	5	1	1	1	1	1	5	1	1	2	3	3	1	5	5	1	1	1	51
10120202	1	2	1	2	5	3	1	1	1	1	1	3	1	1	2	3	3	1	5	3	1	1	1	44
10120203	1	3	1	2	5	5	1	1	3	2	1	3	1	1	2	3	3	1	5	1	1	1	1	48
10130101	1	2	2	1	5	5	1	3	1	1	1	1	4	1	2	5	3	1	5	3	1	1	1	51
10130102	1	1	2	1	5	5	1	5	1	1	1	1	3	1	2	5	3	1	5	3	1	1	1	51
10130103	1	3	2	1	5	5	1	3	1	1	1	1	4	1	2	5	3	1	5	3	1	1	1	52
10130104	1	1	2	1	5	3	1	3	1	1	1	1	4	1	2	5	3	1	5	3	3	1	1	50
10130105	1	1	1	1	5	1	1	3	1	1	1	3	1	1	2	5	3	1	5	3	3	1	1	46
10130106	1	1	2	1	5	1	1	1	1	1	1	1	2	1	2	5	3	1	5	3	3	1	1	44
10130201	1	1	2	1	5	5	1	1	1	1	1	1	4	1	1	5	3	1	5	1	1	1	1	45
10130202	1	2	2	1	5	5	1	1	1	1	1	1	4	1	1	5	3	1	5	3	1	1	1	48
10130203	1	2	2	1	5	5	1	3	1	1	1	1	4	1	2	5	3	1	5	3	1	1	1	51
10130204	1	1	3	1	5	3	1	3	1	1	1	1	4	1	1	5	3	1	5	5	1	1	1	50
10130205	1	1	2	1	5	3	1	3	1	1	1	1	4	1	2	5	3	1	5	3	3	1	1	50
10130206	1	2	2	1	5	5	1	3	1	1	1	1	4	1	2	5	3	1	5	5	1	1	1	53
10130301	1	1	2	1	5	1	1	3	1	1	1	1	3	1	1	5	3	1	5	3	3	1	1	46
10130302	1	1	3	1	5	1	1	3	1	1	1	1	1	1	1	5	3	1	5	3	5	1	1	47
10130303	1	1	2	1	5	1	1	1	1	1	1	1	1	1	1	5	3	1	5	5	5	1	1	46

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
10130304	1	1	2	1	5	1	1	3	1	1	1	2	1	1	1	5	3	1	5	3	3	1	1	45
10130305	1	1	2	1	5	1	1	1	1	1	1	2	1	1	1	5	3	1	5	3	5	1	1	45
10130306	1	1	2	2	5	1	1	3	1	1	1	2	1	1	1	5	3	1	5	5	5	1	1	50
10140101	1	2	1	1	5	1	1	3	2	1	1	3	1	1	2	1	3	1	5	3	1	1	1	42
10140102	1	1	1	1	5	5	1	1	1	1	1	3	1	1	1	1	3	1	5	5	1	1	1	43
10140103	1	2	1	1	5	1	1	1	2	1	1	3	1	1	2	1	3	1	5	3	3	1	1	42
10140104	1	1	1	2	5	1	1	3	1	1	1	3	1	1	2	1	3	1	5	5	1	1	1	43
10140105	1	1	1	1	5	1	1	3	2	1	1	3	1	1	2	1	3	1	5	3	1	1	1	41
10140201	1	1	1	2	5	5	1	3	1	1	1	3	2	1	2	1	3	1	5	3	1	1	1	46
10140202	1	1	2	2	5	5	1	1	1	1	1	3	1	1	2	1	3	1	5	5	1	1	1	46
10140203	1	1	3	2	5	1	1	3	1	1	1	3	1	1	2	1	3	1	5	5	1	1	1	45
10140204	1	1	2	1	5	1	1	1	1	1	1	3	1	1	2	1	3	1	5	5	1	1	1	41
10150001	1	1	1	1	5	1	1	3	2	1	1	3	2	1	2	3	5	3	5	3	3	1	1	50
10150002	1	1	1	1	5	1	1	3	1	1	1	3	2	1	2	3	5	3	5	3	3	1	1	49
10150003	1	1	1	1	5	1	1	1	1	1	1	3	3	1	2	3	5	3	5	3	5	3	1	52
10150004	1	1	2	1	5	1	1	3	2	1	1	3	3	1	2	3	5	3	5	3	5	3	1	56
10150005	1	1	1	1	5	1	1	1	2	1	1	3	3	1	2	3	5	3	5	3	5	3	1	53
10150006	1	1	2	1	5	1	1	1	2	1	1	3	2	1	2	3	5	3	5	3	3	1	1	49

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
10150007	1	1	1	1	5	1	1	3	2	1	1	3	3	1	3	3	5	3	5	3	5	3	1	56
10160001	1	1	1	1	5	5	1	3	2	1	2	1	4	1	2	1	5	1	5	3	1	1	1	49
10160002	1	2	2	1	5	3	1	3	1	1	1	1	4	1	2	1	5	1	5	3	1	1	1	47
10160003	1	2	2	1	5	3	1	1	2	1	2	1	3	1	2	1	5	1	5	3	1	1	1	46
10160004	1	2	2	1	5	1	1	3	2	1	2	1	3	1	2	1	5	1	5	5	3	1	1	50
10160005	1	2	1	1	5	1	1	1	2	1	1	2	1	1	3	1	5	1	5	3	3	1	1	44
10160006	1	2	1	1	5	1	1	3	2	1	1	3	1	1	2	1	5	1	5	5	3	1	1	48
10160007	1	1	2	1	5	1	1	3	1	1	1	2	1	1	2	1	5	1	5	3	5	1	1	46
10160008	1	1	2	1	5	1	1	1	1	1	1	2	1	1	2	1	5	1	5	3	5	1	1	44
10160009	1	1	2	1	5	1	1	1	2	1	1	3	1	1	2	1	5	1	5	5	3	1	1	46
10160010	1	1	1	1	5	1	1	1	2	1	1	2	1	1	2	1	5	1	5	3	1	1	1	40
10160011	1	3	2	1	5	3	1	3	2	1	2	3	1	1	3	1	5	1	5	5	1	1	1	52
10170101	1	3	1	1	5	5	1	5	2	1	1	3	2	1	2	1	5	1	5	1	1	1	1	50
10170102	1	3	2	2	5	5	1	3	2	1	2	3	1	1	3	1	5	1	5	5	1	1	1	55
10170103	1	2	1	1	5	3	1	1	2	1	2	3	1	1	3	1	5	1	5	5	1	1	1	48
10170201	1	3	1	1	5	1	1	1	2	1	2	2	1	1	3	1	5	1	5	3	1	1	1	44
10170202	1	3	1	2	5	3	1	3	2	1	2	2	1	1	3	1	5	1	5	5	1	1	1	51
10170203	1	3	2	3	5	5	1	3	2	1	1	2	2	1	4	1	5	1	5	5	1	1	1	56
10170204	1	3	2	1	3	3	1	1	2	1	1	2	3	1	4	1	5	1	5	3	1	3	1	49
10180001	1	1	3	1	3	5	1	3	3	2	1	4	1	1	1	5	5	1	5	1	3	3	3	57
10180002	1	1	2	1	5	5	1	3	3	2	1	5	1	1	1	5	5	1	5	1	1	1	1	53

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
10180003	1	1	2	1	5	5	1	1	3	2	1	5	1	1	1	5	5	1	5	3	1	1	1	53
10180004	1	1	2	1	5	3	1	1	3	2	1	5	1	1	1	5	5	1	5	3	1	1	1	51
10180005	1	1	2	1	5	5	1	3	3	2	1	5	1	1	1	5	5	1	5	3	1	1	1	55
10180006	1	1	2	2	5	5	1	1	3	2	1	5	1	1	1	5	5	1	5	3	3	1	1	56
10180007	1	2	2	2	5	5	1	1	2	2	1	5	1	1	1	5	5	1	5	3	1	1	1	54
10180008	1	1	1	2	5	3	1	3	1	1	1	5	1	1	2	5	5	1	5	1	1	1	1	49
10180009	1	2	1	1	5	3	1	3	1	1	1	3	2	1	2	5	5	1	5	3	1	3	1	52
10180010	2	3	2	2	5	5	1	3	3	2	1	4	1	1	1	5	5	1	5	1	1	1	1	56
10180011	1	2	1	2	5	5	1	3	2	2	1	5	1	1	2	5	5	1	5	3	1	1	1	56
10180012	1	3	1	2	5	5	1	3	2	1	1	3	1	1	2	5	5	1	5	5	1	1	1	56
10180013	1	1	1	1	5	5	1	3	1	1	1	3	3	1	2	5	5	1	5	5	1	3	1	56
10180014	1	1	1	1	5	1	1	3	2	1	1	2	3	1	2	5	5	1	5	5	1	3	1	52
10190001	1	2	1	5	3	3	1	3	3	2	1	4	1	1	1	5	5	3	5	1	1	3	3	58
10190002	1	4	1	5	3	5	1	3	3	2	1	4	1	1	2	5	5	3	5	1	1	3	3	63
10190003	1	4	2	5	3	5	1	3	2	1	1	3	1	1	5	5	5	3	5	1	1	3	3	64
10190004	1	4	1	3	3	3	1	1	3	2	1	4	1	1	1	5	5	3	5	3	1	3	3	58
10190005	1	4	1	3	3	3	1	3	3	2	1	4	1	1	2	5	5	3	5	1	1	3	3	59
10190006	3	3	2	4	3	5	1	3	3	2	1	4	1	1	2	5	5	3	5	1	1	3	3	64

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
10190007	3	3	2	4	3	5	1	3	3	2	1	4	1	1	2	5	5	3	5	1	1	3	3	64
10190008	1	3	4	5	3	5	1	3	2	1	1	3	1	1	4	5	5	3	5	3	1	3	3	66
10190009	1	3	3	4	3	5	1	3	2	1	1	3	1	1	3	5	5	3	5	5	1	3	1	63
10190010	1	3	1	5	3	5	1	3	2	1	1	3	1	1	5	5	5	3	5	3	1	3	3	64
10190011	1	3	1	5	3	5	1	3	2	1	1	3	1	1	5	5	5	3	5	3	1	3	3	64
10190012	1	3	1	3	3	5	1	1	2	1	1	3	1	1	5	5	5	3	5	3	1	3	3	60
10190013	1	3	1	3	3	5	1	3	2	1	1	3	1	1	5	5	5	3	5	3	1	3	3	62
10190014	1	3	4	5	3	5	1	3	2	1	1	3	1	1	4	5	5	3	5	3	1	3	3	66
10190015	1	3	2	2	5	5	1	3	2	1	1	3	1	1	2	5	5	3	5	3	1	1	1	57
10190016	1	2	2	1	5	5	1	1	2	1	1	3	2	1	3	5	5	3	5	5	1	3	1	59
10190017	1	3	2	2	5	5	1	3	2	1	1	3	2	1	4	5	5	3	5	3	1	3	1	62
10190018	1	2	2	1	5	1	1	3	2	1	1	2	3	1	3	5	5	3	5	3	1	3	1	55
10200101	1	3	2	2	5	1	1	3	2	1	1	2	3	1	3	5	5	3	5	3	1	3	1	57
10200102	1	3	2	2	5	1	1	3	2	1	1	2	3	1	3	5	5	3	5	3	1	3	1	57
10200103	1	3	1	2	5	1	1	3	2	1	2	3	3	1	5	5	5	3	5	3	1	3	1	60
10200201	1	3	1	2	5	3	1	1	2	1	2	3	3	1	3	5	5	3	5	3	3	3	1	60
10200202	1	4	2	3	5	5	1	3	2	1	2	3	3	1	4	5	5	3	5	5	1	3	1	68
10200203	1	3	2	3	5	5	1	1	2	1	1	3	3	1	3	5	5	3	5	3	1	3	1	61
10210001	1	1	2	1	5	1	1	1	2	1	1	3	3	1	2	3	5	1	5	3	5	3	1	52
10210002	1	1	2	1	5	1	1	1	2	1	1	2	3	1	2	3	5	1	5	5	3	3	1	51
10210003	1	1	2	1	5	1	1	3	2	1	1	3	3	1	3	3	5	1	5	5	1	3	1	53

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
10210004	1	3	2	1	5	1	1	3	2	1	1	3	3	1	2	3	5	1	5	5	1	3	1	54
10210005	1	1	2	1	5	1	1	1	2	1	1	2	3	1	2	3	5	1	5	5	3	3	1	51
10210006	1	1	2	1	5	1	1	3	2	1	1	3	3	1	2	3	5	1	5	3	5	3	1	54
10210007	1	2	2	1	5	1	1	3	2	1	1	3	3	1	3	3	5	1	5	5	3	3	1	56
10210008	1	1	2	1	5	1	1	1	2	1	1	3	3	1	2	3	5	1	5	3	5	3	1	52
10210009	1	3	1	1	5	1	1	3	2	1	1	3	3	1	3	3	5	1	5	3	3	3	1	54
10210010	1	1	2	1	5	1	1	3	2	1	1	3	3	1	2	3	5	1	5	5	3	3	1	54
10220001	1	2	2	1	5	1	1	3	2	1	1	3	3	1	3	3	5	3	5	3	5	3	1	58
10220002	1	3	2	1	5	1	1	3	2	1	1	3	3	1	3	3	5	3	5	3	3	3	1	57
10220003	1	3	2	2	5	5	1	3	2	1	2	3	3	1	3	3	5	3	5	5	1	3	1	63
10220004	1	3	1	1	5	5	1	3	2	1	2	3	3	1	3	3	5	3	5	5	1	3	1	61
10230001	1	3	2	2	3	5	1	3	2	1	2	2	3	1	3	1	3	3	5	5	1	3	1	56
10230002	1	3	2	2	3	5	1	3	2	1	1	1	4	1	4	1	3	3	5	3	1	3	1	54
10230003	1	3	2	1	3	5	1	3	2	1	2	1	4	1	3	1	3	3	5	3	1	3	1	53
10230004	1	3	2	1	3	5	1	3	2	1	1	2	4	1	3	1	3	3	5	5	1	3	1	55
10230005	1	3	2	1	3	5	1	3	2	1	2	1	4	1	2	1	3	3	5	5	1	3	1	54
10230006	1	4	2	3	3	5	1	3	2	1	2	3	3	1	3	1	3	3	5	3	1	3	1	57
10230007	1	3	2	1	3	5	1	3	2	1	2	1	4	1	4	1	3	3	5	3	1	3	1	54

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
10240001	1	3	2	2	5	5	1	5	2	1	2	3	3	1	4	3	1	3	3	5	1	3	1	60
10240002	1	3	2	2	3	5	1	3	2	1	2	2	4	1	3	3	1	3	3	3	1	3	1	53
10240003	1	3	2	1	3	5	1	3	2	1	2	1	4	1	2	3	1	3	3	3	1	3	1	50
10240004	1	3	3	1	3	3	1	3	2	1	2	3	3	1	3	3	1	3	3	5	1	3	1	53
10240005	1	3	2	1	3	5	1	3	2	1	2	3	2	1	2	3	1	3	3	3	1	3	1	50
10240006	1	3	2	2	5	3	1	1	2	1	2	3	3	1	4	3	1	3	3	5	1	3	1	54
10240007	1	3	2	1	5	3	1	3	2	1	2	3	2	1	4	3	1	3	3	3	1	3	1	52
10240008	1	3	2	1	5	5	1	3	2	1	2	3	2	1	4	3	1	3	3	5	1	3	1	56
10240009	1	3	2	1	3	3	1	3	2	1	2	1	4	1	3	3	1	3	3	3	1	3	1	49
10240010	1	3	2	1	3	5	1	3	2	1	2	2	3	1	3	3	1	3	3	3	1	3	3	53
10240011	1	3	3	2	5	5	1	3	2	1	2	3	2	1	2	3	1	3	3	3	1	3	3	56
10240012	1	3	2	3	3	5	1	1	2	1	2	3	3	1	2	3	1	3	3	3	1	3	3	53
10240013	1	3	2	1	3	5	1	1	2	1	2	2	3	1	3	3	1	3	3	3	1	3	1	49
10250001	1	1	1	2	3	3	1	3	2	1	1	3	1	1	4	5	5	3	5	3	1	3	3	56
10250002	1	1	1	2	3	3	1	3	2	1	1	2	2	1	4	5	5	3	5	3	1	3	3	56
10250003	1	1	2	2	3	1	1	3	2	1	1	2	1	1	4	5	5	3	5	3	1	3	3	54
10250004	1	1	3	1	5	1	1	1	2	1	1	2	2	1	2	5	5	3	5	3	1	3	1	51
10250005	1	1	2	1	5	1	1	3	2	1	1	2	2	1	3	5	5	3	5	3	1	3	1	53
10250006	1	1	2	1	5	1	1	3	2	1	1	2	2	1	3	5	5	3	5	5	1	3	1	55
10250007	1	2	2	1	5	1	1	1	2	1	1	2	3	1	2	5	5	3	5	3	1	3	1	52
10250008	1	2	2	1	5	1	1	1	2	1	1	2	3	1	2	5	5	3	5	3	1	3	1	52

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
10250009	1	2	1	1	5	1	1	1	2	1	1	2	3	1	2	5	5	3	5	5	1	3	1	53
10250010	1	1	1	1	5	1	1	3	2	1	1	2	1	1	5	5	5	3	5	3	1	1	1	51
10250011	1	1	2	1	5	1	1	3	2	1	1	2	2	1	3	5	5	3	5	5	3	3	1	57
10250012	1	1	2	1	5	1	1	3	2	1	1	2	1	1	5	5	5	3	5	3	1	3	1	54
10250013	1	1	2	1	5	1	1	3	2	1	1	2	1	1	4	5	5	3	5	3	1	1	1	51
10250014	1	2	2	1	5	1	1	3	2	1	1	2	2	1	4	5	5	3	5	5	3	3	1	59
10250015	1	1	2	1	5	1	1	3	2	1	1	2	2	1	3	5	5	3	5	5	1	1	1	53
10250016	1	2	1	1	5	1	1	3	2	1	1	2	2	1	3	5	5	3	5	3	1	3	1	53
10250017	1	3	1	1	5	1	1	3	2	1	1	3	1	1	2	5	5	3	5	5	1	1	1	53
10260001	1	1	1	1	5	1	1	1	2	1	1	2	1	1	3	3	5	3	5	3	1	3	1	47
10260002	1	1	2	1	5	1	1	3	2	1	1	2	1	1	4	3	5	3	5	3	1	3	1	51
10260003	1	1	1	1	5	1	1	3	2	1	1	2	1	1	2	3	5	3	5	5	1	1	1	48
10260004	1	1	1	1	5	1	1	3	2	1	1	2	1	1	3	3	5	3	5	5	3	3	1	53
10260005	1	1	1	1	5	1	1	3	2	1	1	2	1	1	2	3	5	3	5	5	1	1	1	48
10260006	1	3	2	1	5	1	1	3	2	1	1	2	1	1	4	3	5	3	5	5	1	1	1	53
10260007	1	3	1	1	5	1	1	3	2	1	1	3	1	1	3	3	5	3	5	5	1	1	1	52
10260008	1	3	2	1	5	3	1	1	3	1	1	3	1	1	3	3	5	3	5	5	1	1	1	54
10260009	1	2	2	1	5	1	1	1	2	1	1	3	1	1	3	3	5	3	5	3	1	1	1	48

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
10260010	1	3	2	1	5	1	1	3	2	1	1	2	1	1	4	3	5	3	5	3	1	1	1	51
10260011	1	1	2	1	5	1	1	3	2	1	1	2	1	1	3	3	5	3	5	5	1	1	1	50
10260012	1	1	2	1	5	1	1	3	2	1	1	2	1	1	3	3	5	3	5	5	3	1	1	52
10260013	1	1	2	1	5	1	1	3	2	1	1	3	1	1	3	3	5	3	5	5	1	1	1	51
10260014	1	1	2	1	5	1	1	3	2	1	1	3	1	1	4	3	5	3	5	5	1	1	1	52
10260015	1	2	2	1	5	1	1	3	2	1	1	3	1	1	4	3	5	3	5	5	1	1	1	53
10270101	1	3	3	1	5	1	1	1	3	1	1	4	1	1	3	3	5	3	5	5	1	1	1	54
10270102	1	3	2	2	5	5	1	1	2	1	1	4	1	1	3	3	5	3	5	3	1	1	1	55
10270103	1	3	2	2	5	3	1	3	2	1	1	3	1	1	4	3	5	3	5	5	1	1	1	57
10270104	1	4	2	3	5	5	1	3	2	1	2	3	1	1	3	3	5	3	5	5	1	1	1	61
10270201	1	3	2	2	5	3	1	3	2	1	1	3	3	1	4	3	5	3	5	5	1	3	1	61
10270202	1	3	2	2	5	5	1	1	2	1	1	3	3	1	4	3	5	3	5	5	1	3	1	61
10270203	1	3	2	1	5	3	1	1	2	1	1	3	3	1	4	3	5	3	5	3	1	3	1	56
10270204	1	3	2	2	5	3	1	3	2	1	1	3	3	1	3	3	5	3	5	3	1	3	1	58
10270205	1	3	2	1	5	1	1	3	2	1	1	4	2	1	3	3	5	3	5	5	1	1	1	55
10270206	1	3	2	1	5	1	1	1	2	1	1	3	3	1	3	3	5	3	5	5	1	3	1	55
10270207	1	2	2	1	5	1	1	3	2	1	1	3	2	1	3	3	5	3	5	5	3	3	1	57
10280101	1	3	2	2	3	5	1	1	2	1	2	2	2	1	2	3	1	3	3	3	1	3	3	50
10280102	1	3	2	1	3	3	1	3	2	1	2	1	3	1	2	3	1	3	3	3	1	3	1	47
10280103	1	3	2	1	3	3	1	3	2	1	1	2	2	1	1	3	1	3	3	3	3	3	3	49
10280201	1	3	2	1	3	3	1	3	2	1	2	2	3	1	2	3	1	3	3	3	1	3	1	48

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
10280202	1	3	2	1	3	1	1	1	2	1	1	3	2	1	2	3	1	3	3	3	1	3	5	47
10280203	1	3	2	2	3	3	1	1	2	1	1	3	2	1	1	3	1	3	3	3	1	3	5	49
10290101	1	3	2	2	5	5	1	3	3	1	1	3	1	1	2	1	1	1	3	3	1	1	1	46
10290102	1	3	2	3	5	5	1	3	3	1	1	3	2	1	1	1	1	1	3	5	1	3	1	51
10290103	1	3	2	2	5	3	1	3	3	1	1	3	2	1	1	1	1	1	3	5	3	3	1	50
10290104	1	3	2	2	5	3	1	3	3	1	1	3	2	1	2	1	1	1	3	3	3	3	1	49
10290105	1	3	2	3	3	3	1	3	3	1	1	3	2	1	2	1	1	1	3	3	3	3	5	52
10290106	1	3	2	3	3	5	1	5	3	2	1	3	2	1	2	1	1	1	3	3	1	3	5	55
10290107	1	3	1	3	3	5	1	3	3	2	1	4	2	1	2	1	1	1	3	1	1	3	5	51
10290108	1	3	2	3	3	5	1	3	3	1	1	3	2	1	1	1	1	1	3	3	1	3	5	51
10290109	1	3	1	3	3	3	1	3	3	2	1	4	2	1	2	1	1	1	3	1	1	3	5	49
10290110	1	3	1	3	3	5	1	3	3	2	1	4	2	1	2	1	1	1	3	3	1	3	5	53
10290111	1	3	2	3	3	3	1	5	3	2	1	4	2	1	2	1	1	1	3	2	1	3	5	53
10290201	1	3	3	3	3	5	1	3	3	2	1	5	2	1	2	1	1	1	3	3	1	3	5	56
10290202	1	3	4	3	3	1	1	5	3	2	1	5	2	1	1	1	1	1	3	3	1	3	5	54
10290203	1	3	2	3	3	3	1	5	3	2	1	5	2	1	2	1	1	1	3	1	1	3	5	53
10300101	1	4	2	2	3	5	1	3	2	1	2	3	2	1	2	3	1	3	3	4	1	3	3	55
10300102	1	3	1	3	3	5	1	5	3	2	1	4	2	1	2	3	1	3	3	1	1	3	5	57

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
10300103	1	3	2	3	3	3	1	1	3	1	1	3	2	1	2	3	1	3	3	3	1	3	5	52
10300104	1	3	2	2	3	5	1	3	3	1	1	3	2	1	2	3	1	3	3	3	1	3	5	55
10300200	1	4	2	3	3	5	1	3	3	2	2	5	2	1	2	3	1	3	3	3	1	3	5	61
11010001	1	3	1	3	3	5	2	3	3	2	1	4	2	1	2	1	1	1	3	1	1	3	1	48
11010002	1	3	1	4	3	5	1	3	3	2	1	4	2	1	2	1	1	1	3	1	1	3	5	52
11010003	1	3	1	3	3	5	1	5	3	2	1	5	2	1	2	1	1	1	3	1	1	3	3	52
11010004	1	3	1	3	3	3	2	5	3	2	2	5	2	1	3	1	1	1	3	3	3	3	1	55
11010005	1	3	1	2	3	1	2	3	3	2	1	5	2	1	2	1	1	1	3	3	3	3	1	48
11010006	1	3	1	3	3	5	1	5	3	2	1	5	2	1	2	1	1	1	3	1	1	3	3	52
11010007	1	3	2	1	3	3	1	5	3	2	1	5	2	1	2	1	1	1	3	1	3	3	3	51
11010008	1	3	2	2	3	3	1	5	3	2	1	5	2	1	2	1	1	1	3	1	3	3	3	52
11010009	1	3	2	2	3	3	2	5	3	2	1	5	2	1	3	1	1	1	3	1	5	3	1	54
11010010	1	3	1	3	3	3	1	5	3	2	1	5	2	1	2	1	1	1	3	1	5	3	3	54
11010011	1	3	2	2	3	3	1	5	3	2	1	5	2	1	1	1	1	1	3	3	5	3	3	55
11010012	1	3	1	3	3	3	2	3	3	2	2	5	2	1	3	1	1	1	3	5	5	3	1	57
11010013	1	3	2	1	3	5	2	3	3	1	1	5	2	1	5	1	1	1	3	3	3	3	1	54
11010014	1	3	1	3	3	3	2	3	3	2	1	5	2	1	3	1	1	1	3	3	3	3	1	52
11020001	1	3	1	5	3	3	1	3	3	2	1	5	1	1	1	5	5	3	5	1	1	3	3	60
11020002	1	3	1	5	3	5	1	3	3	2	1	4	1	1	1	5	5	3	5	1	1	3	3	61
11020003	1	3	1	4	3	5	1	3	2	1	1	3	1	1	3	5	5	3	5	1	1	3	3	59
11020004	1	3	2	3	3	5	1	3	2	1	1	3	1	1	3	5	5	3	5	3	1	3	3	61

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
11020005	1	3	1	3	3	5	1	1	2	1	1	3	1	1	2	5	5	3	5	1	1	3	3	55
11020006	1	3	1	3	3	5	1	3	3	2	1	4	1	1	1	5	5	3	5	1	1	3	3	59
11020007	1	3	2	3	3	5	1	3	2	1	1	4	1	1	1	5	5	3	5	3	1	3	3	60
11020008	1	3	1	3	3	5	1	3	2	1	1	3	1	1	3	5	5	3	5	3	3	3	3	62
11020009	2	1	1	1	3	1	1	3	2	1	1	3	1	1	3	5	5	3	5	1	3	3	3	53
11020010	1	1	2	3	3	3	1	3	2	1	1	4	1	1	1	5	5	3	5	3	1	3	3	56
11020011	1	3	1	2	3	5	1	1	2	1	1	3	1	1	3	5	5	3	5	3	1	3	3	57
11020012	1	2	1	3	3	5	1	3	2	1	1	3	1	1	3	5	5	3	5	3	1	3	3	59
11020013	2	1	1	2	3	1	1	3	2	1	1	3	1	1	3	5	5	3	5	3	5	3	3	58
11030001	1	2	1	2	5	1	1	3	2	1	1	2	1	1	3	5	5	5	5	5	3	1	1	57
11030002	1	1	1	1	5	1	1	3	2	1	1	2	1	1	3	5	5	5	5	3	3	3	1	55
11030003	1	3	2	3	5	1	1	3	2	1	1	2	1	1	3	5	5	5	5	5	5	1	1	62
11030004	1	3	2	1	5	1	1	1	2	1	1	2	1	1	4	5	5	5	5	5	3	1	1	57
11030005	1	3	2	1	5	1	1	1	2	1	1	2	1	1	3	5	5	5	5	5	3	1	1	56
11030006	1	2	3	2	5	1	1	3	2	1	1	2	1	1	4	5	5	5	5	5	5	1	1	62
11030007	1	1	2	1	5	1	1	3	2	1	1	2	1	1	2	5	5	5	5	5	3	1	1	55
11030008	1	2	2	1	5	1	1	3	2	1	1	2	1	1	3	5	5	5	5	5	1	1	1	55
11030009	1	2	2	1	5	1	1	1	2	1	1	2	1	1	4	5	5	5	5	5	3	1	1	56

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
11030010	1	3	2	2	5	5	1	1	2	1	1	3	1	1	3	5	5	5	5	5	1	1	1	60
11030011	1	3	1	1	5	3	1	1	2	1	1	3	1	1	3	5	5	5	5	3	1	1	1	54
11030012	1	3	2	2	5	5	1	3	2	1	1	3	1	1	3	5	5	5	5	3	1	1	1	60
11030013	1	3	2	2	5	5	1	3	2	1	1	3	1	1	4	5	5	5	5	3	1	1	1	61
11030014	1	3	2	1	5	5	1	1	2	1	1	3	1	1	4	5	5	5	5	3	1	1	1	58
11030015	1	3	2	1	5	5	1	1	2	1	1	3	1	1	5	5	5	5	5	3	1	1	1	59
11030016	1	4	2	2	5	5	1	3	2	1	1	3	1	1	4	5	5	5	5	3	1	1	1	62
11030017	1	3	1	3	5	5	1	3	3	1	1	3	1	1	2	5	5	5	5	3	1	1	1	60
11030018	1	3	1	2	5	5	1	3	3	1	1	3	1	1	2	5	5	5	5	3	1	1	1	59
11040001	1	1	1	1	3	1	1	3	2	1	1	3	1	1	1	5	5	3	5	5	1	3	1	50
11040002	1	1	1	1	5	1	1	3	2	1	1	3	2	1	2	5	5	3	5	3	5	3	1	56
11040003	1	1	1	1	5	1	1	3	2	1	1	3	1	1	2	5	5	3	5	3	5	3	1	55
11040004	1	1	1	1	3	1	1	3	2	1	1	3	1	1	3	5	5	3	5	3	5	3	3	56
11040005	1	1	1	2	3	1	1	3	2	1	1	2	1	1	3	5	5	3	5	3	5	3	1	54
11040006	1	3	1	2	5	1	1	3	2	1	1	2	2	1	3	5	5	3	5	5	5	1	1	59
11040007	1	2	2	2	5	1	1	3	2	1	1	2	1	1	3	5	5	3	5	5	5	1	1	58
11040008	1	1	2	1	5	1	1	3	2	1	1	2	2	1	2	5	5	3	5	3	5	1	1	54
11050001	1	2	2	1	5	3	1	3	2	1	1	3	3	1	2	1	3	3	5	3	3	3	1	53
11050002	1	3	2	2	5	5	1	3	3	1	1	5	3	1	4	1	3	3	5	3	1	3	1	60
11050003	1	3	2	3	5	5	1	3	3	1	1	4	3	1	3	1	3	3	5	3	1	3	1	59
11060001	1	3	2	1	5	5	1	1	3	1	1	3	2	1	3	1	3	1	5	3	1	3	1	51

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
11060002	1	1	2	1	5	1	1	3	2	1	1	3	2	1	2	1	3	1	5	3	5	3	1	49
11060003	1	1	2	1	5	1	1	1	2	1	1	3	2	1	3	1	3	1	5	3	5	1	1	46
11060004	1	3	2	1	5	5	1	1	2	1	1	3	3	1	4	1	3	1	5	5	1	3	1	54
11060005	1	3	2	1	5	3	1	1	2	1	1	3	2	1	4	1	3	1	5	3	1	1	1	47
11060006	1	3	2	2	5	5	1	3	3	1	1	3	3	1	3	1	3	1	5	5	1	3	1	57
11070101	1	3	2	1	5	3	1	5	3	1	1	3	1	1	1	1	1	3	3	3	1	1	1	46
11070102	1	2	2	1	5	5	1	3	3	1	1	3	1	1	1	1	1	3	3	3	1	1	1	45
11070103	1	3	3	2	5	5	1	5	3	1	1	3	2	1	3	1	1	3	3	1	1	3	1	53
11070104	1	3	1	1	5	3	1	1	3	1	1	3	1	1	1	1	1	3	3	3	3	1	1	43
11070105	1	3	3	4	5	5	1	3	3	1	2	3	3	1	4	1	1	3	3	1	1	3	1	56
11070106	1	3	2	2	5	5	1	3	3	1	1	3	2	1	2	1	1	3	3	5	1	3	1	53
11070107	1	3	3	2	5	5	1	3	3	1	1	3	3	1	3	1	1	3	3	1	1	3	1	52
11070201	1	3	2	1	5	3	1	3	3	1	1	3	1	1	2	1	1	3	3	3	1	1	1	45
11070202	1	3	1	2	5	5	1	3	3	1	1	3	1	1	3	1	1	3	3	3	1	1	1	48
11070203	1	2	2	2	5	5	1	3	3	1	1	3	1	1	2	1	1	3	3	5	1	1	1	49
11070204	1	3	2	1	5	3	1	5	3	1	1	3	1	1	1	1	1	3	3	3	1	1	1	46
11070205	1	3	2	1	5	3	1	5	3	1	1	3	1	1	2	1	1	3	3	3	1	1	1	47
11070206	1	3	1	3	5	5	1	5	3	2	1	3	3	1	2	1	1	3	3	4	1	3	1	56

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
11070207	1	3	2	3	3	5	1	5	3	2	1	3	2	1	3	1	1	3	3	5	1	3	3	58
11070208	1	3	1	4	3	5	1	5	3	2	1	3	2	1	3	1	1	3	3	3	1	3	3	56
11070209	1	3	2	3	5	5	1	5	3	2	1	3	3	1	3	1	1	3	3	1	1	3	1	55
11080001	1	1	1	2	3	1	1	3	3	2	1	4	1	1	1	3	5	3	5	5	1	3	1	52
11080002	1	1	1	2	3	1	1	3	3	2	1	5	1	1	1	3	5	3	5	5	1	3	1	53
11080003	1	1	1	3	3	1	1	3	2	1	1	4	1	1	1	3	5	3	5	5	1	3	1	51
11080004	1	1	1	3	3	3	1	3	2	1	1	5	1	1	1	3	5	3	5	5	1	3	1	54
11080005	1	1	1	2	3	1	1	3	2	1	1	3	1	1	1	3	5	3	5	5	1	3	1	49
11080006	1	1	1	1	3	1	1	1	2	1	1	3	1	1	1	3	5	3	5	5	1	3	1	46
11080007	1	1	1	1	3	1	1	3	2	1	1	3	1	1	1	3	5	3	5	3	1	3	1	46
11080008	1	1	1	1	3	1	1	3	2	1	1	3	1	1	2	3	5	3	5	3	1	3	1	47
11090101	1	1	1	1	3	3	1	3	2	1	1	3	3	1	1	3	1	3	5	3	1	3	3	48
11090102	1	1	1	2	3	3	1	3	2	1	1	3	2	1	1	3	1	3	5	3	1	3	1	46
11090103	1	1	1	3	3	3	1	3	2	1	1	3	3	1	2	3	1	3	5	5	3	3	3	55
11090104	1	1	1	1	3	1	1	3	2	1	1	3	2	1	1	3	1	3	5	3	1	3	1	43
11090105	1	3	1	2	3	5	1	1	2	1	1	3	4	1	2	3	1	3	5	1	1	3	5	53
11090106	1	2	1	1	3	3	1	1	2	1	1	3	4	1	4	3	1	3	5	1	1	3	5	51
11090201	1	2	3	1	5	3	1	3	2	1	1	4	3	1	2	3	1	3	5	1	1	3	1	51
11090202	1	3	2	3	5	5	1	3	3	1	1	5	3	1	4	3	1	3	5	5	1	3	1	63
11090203	1	3	2	3	5	5	1	3	3	1	1	5	3	1	3	3	1	3	5	3	1	3	1	60
11090204	1	3	2	2	5	3	1	3	3	2	1	4	3	1	4	3	1	3	5	3	1	3	1	58

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
11100101	1	1	1	2	5	1	1	1	2	1	1	3	3	1	2	3	5	3	5	5	3	3	1	54
11100102	1	2	1	3	5	1	1	1	2	1	1	3	3	1	3	3	5	3	5	3	5	3	1	57
11100103	1	1	1	3	3	1	1	3	2	1	1	3	4	1	2	3	5	3	5	3	5	3	3	58
11100104	1	2	2	2	3	3	1	3	2	1	1	3	4	1	3	3	5	3	5	3	3	3	3	60
11100201	1	1	2	1	5	1	1	3	2	1	1	3	3	1	2	3	5	3	5	3	5	3	1	56
11100202	1	2	2	2	3	1	1	3	2	1	1	3	4	1	3	3	5	3	5	3	5	3	5	62
11100203	1	1	3	1	5	1	1	3	2	1	1	3	3	1	2	3	5	3	5	3	5	3	3	59
11100301	1	3	2	2	5	5	1	3	2	1	1	4	3	1	3	3	5	3	5	3	1	3	1	61
11100302	1	3	2	2	5	5	1	3	3	1	1	4	3	1	3	3	5	3	5	3	1	3	1	62
11100303	1	3	2	2	5	5	1	1	3	1	1	4	3	1	4	3	5	3	5	3	1	3	1	61
11110101	1	4	2	3	5	5	1	3	3	1	2	3	3	1	4	1	1	3	3	3	1	3	1	57
11110102	1	3	2	2	5	5	1	3	3	2	1	3	3	1	3	1	1	3	3	5	1	3	1	56
11110103	1	3	1	4	5	5	1	5	3	2	1	3	3	1	3	1	1	3	3	4	1	3	1	58
11110104	1	3	2	3	5	5	1	3	3	2	1	3	3	1	3	1	1	3	3	3	1	3	1	55
11110105	1	3	2	2	5	5	1	1	4	3	1	3	3	1	3	1	1	3	3	3	1	3	1	54
11110201	1	3	1	3	3	5	2	3	3	2	1	4	2	1	3	1	1	3	3	3	1	3	1	53
11110202	1	3	1	3	3	5	2	3	3	2	1	5	2	1	2	1	1	3	3	3	1	3	1	53
11110203	1	3	1	3	3	5	2	1	4	3	1	5	2	1	2	1	1	3	3	1	1	3	1	51

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
11110204	1	3	1	3	3	5	2	3	4	3	1	4	2	1	2	1	1	3	3	3	1	3	1	54
11110205	1	3	1	3	3	5	2	3	4	3	1	5	2	1	3	1	1	3	3	3	1	3	1	56
11110206	1	3	1	3	3	5	2	3	4	3	1	4	2	1	1	1	1	3	3	5	1	3	1	55
11110207	1	4	2	2	3	5	2	3	3	2	1	5	2	1	5	1	1	3	3	2	1	3	1	56
11120101	1	3	1	1	3	5	1	3	2	1	1	3	3	1	3	5	5	1	5	5	1	3	3	60
11120102	1	3	2	1	3	5	1	3	2	1	1	3	4	1	2	5	5	1	5	3	1	3	5	61
11120103	1	3	1	2	3	5	1	3	2	1	1	3	4	1	3	5	5	1	5	3	1	3	5	62
11120104	1	2	1	1	3	5	1	3	2	1	1	3	4	1	4	5	5	1	5	3	1	3	5	61
11120105	1	1	1	2	3	1	1	3	2	1	1	3	4	1	3	5	5	1	5	3	1	3	5	56
11120201	1	1	1	2	3	3	1	3	2	1	1	3	4	1	3	5	5	1	5	3	1	3	5	58
11120202	1	2	1	1	5	1	1	1	2	1	1	3	3	1	3	5	5	1	5	3	1	3	3	53
11120301	1	3	1	1	3	5	1	3	2	1	1	3	4	1	5	5	5	1	5	3	1	3	5	63
11120302	1	2	2	1	5	1	1	1	2	1	1	4	3	1	4	5	5	1	5	3	1	3	3	56
11120303	1	3	2	1	5	5	1	1	2	1	1	4	3	1	3	5	5	1	5	1	1	3	1	56
11120304	1	2	2	1	5	1	1	1	2	1	1	4	3	1	4	5	5	1	5	3	1	3	3	56
11130101	1	3	1	1	3	3	1	3	2	1	1	3	4	1	3	1	5	3	5	1	3	3	3	55
11130102	1	3	2	1	5	5	1	3	2	1	1	3	3	1	4	1	5	3	5	3	1	3	3	60
11130103	1	1	1	1	3	1	1	3	2	1	1	3	4	1	3	1	5	3	5	3	1	3	5	53
11130104	1	1	2	1	3	1	1	3	2	1	1	2	4	1	2	1	5	3	5	3	1	3	5	52
11130105	1	2	1	1	3	3	1	3	2	1	1	3	4	1	3	1	5	3	5	3	3	3	5	58
11130201	1	3	2	2	5	3	1	3	3	1	1	4	3	1	3	1	5	3	5	1	1	3	3	58

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
11130202	1	3	2	1	5	5	1	3	2	1	1	5	3	1	3	1	5	3	5	3	1	3	1	59
11130203	1	3	2	1	5	5	1	3	2	1	1	4	3	1	3	1	5	3	5	3	1	3	1	58
11130204	1	1	1	1	3	1	1	1	2	1	1	3	4	1	2	1	5	3	5	3	5	3	5	54
11130205	1	1	1	1	3	1	1	3	2	1	1	2	4	1	2	1	5	3	5	3	5	3	5	55
11130206	1	3	1	2	3	5	1	1	2	1	1	3	4	1	3	1	5	3	5	1	1	3	5	56
11130207	1	3	1	1	3	5	1	3	2	1	1	3	4	1	3	1	5	3	5	3	1	3	5	59
11130208	1	3	2	1	5	5	1	3	3	1	1	5	3	1	3	1	5	3	5	5	1	3	1	62
11130209	1	2	2	3	3	5	1	3	2	1	1	3	4	1	3	1	5	3	5	3	1	3	5	61
11130210	1	3	2	3	5	5	1	3	3	1	1	4	3	1	4	1	5	3	5	3	1	3	3	64
11130301	1	2	3	1	5	1	1	1	2	1	1	3	3	1	2	1	5	3	5	3	1	3	3	52
11130302	1	3	2	1	5	5	1	3	2	1	1	5	3	1	3	1	5	3	5	5	1	3	1	61
11130303	1	3	2	2	5	5	1	3	3	1	1	5	3	1	4	1	5	3	5	3	1	3	1	62
11130304	1	3	2	3	5	3	1	3	3	1	1	4	3	1	4	1	5	3	5	3	1	3	1	60
11140101	1	3	2	3	3	5	1	3	3	1	1	3	4	1	2	1	1	3	3	1	3	3	3	54
11140102	1	3	2	2	5	3	1	3	3	1	1	4	3	1	2	1	1	3	3	3	1	3	1	51
11140103	1	3	2	2	5	3	1	3	3	2	1	4	3	1	3	1	1	3	3	1	3	3	1	53
11140104	1	3	2	2	5	3	1	3	3	2	1	4	3	1	3	1	1	3	3	3	3	3	1	55
11140105	1	3	2	2	5	3	1	5	4	3	1	3	3	1	3	1	1	3	3	3	3	3	1	58

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
11140106	1	3	2	2	3	5	1	3	3	2	1	3	3	1	2	1	1	3	3	3	1	3	3	53
11140107	1	3	2	2	5	3	1	5	3	2	1	3	3	1	2	1	1	3	3	3	3	3	1	55
11140108	1	3	1	2	5	3	1	5	4	3	1	3	3	1	2	1	1	3	3	1	3	3	1	54
11140109	1	3	2	2	3	5	2	5	3	2	1	4	2	1	2	1	1	3	3	3	1	3	1	54
11140201	1	3	2	2	3	5	2	1	3	2	1	3	2	1	3	1	1	3	3	3	1	3	1	50
11140202	1	3	2	2	5	5	2	3	3	2	1	3	3	1	3	1	1	3	3	5	1	3	3	59
11140203	1	3	2	1	5	5	2	3	3	2	1	4	3	1	2	1	1	3	3	5	1	3	1	56
11140204	1	3	1	3	5	5	2	1	3	2	1	3	3	1	3	1	1	3	3	3	1	3	3	55
11140205	1	3	2	2	3	5	2	3	3	2	1	4	3	1	3	1	1	3	3	1	1	3	1	52
11140206	1	3	2	2	5	5	2	1	3	2	1	3	3	1	3	1	1	3	3	5	1	3	3	57
11140207	1	3	2	2	5	5	2	5	3	2	1	3	3	1	2	1	1	3	3	3	1	3	3	58
11140208	1	3	2	1	5	3	2	1	3	2	1	3	3	1	2	1	1	3	3	3	1	3	3	51
11140209	1	3	2	1	5	5	2	3	3	2	1	3	3	1	3	1	1	3	3	3	1	3	3	56
11140301	1	3	2	3	3	5	1	3	3	1	1	3	4	1	2	1	1	3	3	1	1	3	5	54
11140302	1	3	2	2	3	5	1	3	3	2	1	3	4	1	3	1	1	3	3	3	1	3	3	55
11140303	1	3	2	3	3	3	1	3	3	2	1	3	4	1	3	1	1	3	3	3	1	3	5	56
11140304	1	3	2	2	5	3	1	3	3	2	1	3	3	1	3	1	1	3	3	3	1	3	3	54
11140305	1	3	2	3	3	5	1	3	3	2	1	3	4	1	3	1	1	3	3	3	1	3	5	58
11140306	1	3	2	2	3	5	1	3	3	2	1	3	4	1	3	1	1	3	3	3	1	3	5	57
11140307	1	3	2	3	3	5	1	3	3	2	1	3	4	1	2	1	1	3	3	5	1	3	5	59
12010001	1	3	3	4	3	5	1	3	3	2	1	3	4	1	4	1	1	3	3	1	1	3	5	59

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
12010002	1	3	2	3	3	5	1	1	3	2	1	3	4	1	2	1	1	3	3	3	1	3	5	55
12010003	1	3	2	3	3	5	1	3	3	2	1	3	4	1	3	1	1	3	3	3	1	3	5	58
12010004	1	3	2	2	3	3	1	5	3	2	1	3	3	1	2	1	1	3	3	3	1	3	3	53
12010005	1	3	2	2	3	3	1	5	3	2	1	3	3	1	3	1	1	3	3	1	1	3	3	52
12020001	1	3	2	3	3	3	1	3	3	2	1	3	4	1	2	1	1	3	3	3	1	3	5	55
12020002	1	3	1	3	3	1	1	3	3	2	1	3	4	1	2	1	1	3	3	1	3	3	5	52
12020003	2	3	1	3	3	5	1	3	3	2	1	3	4	1	3	1	1	3	3	3	1	3	5	58
12020004	1	3	2	3	3	3	1	1	3	2	1	3	4	1	2	1	1	3	3	1	1	3	5	51
12020005	1	3	1	2	3	1	1	3	3	2	1	3	4	1	2	1	1	3	3	3	3	3	5	53
12020006	2	3	1	3	3	5	1	1	3	2	1	3	4	1	2	1	1	3	3	3	1	3	5	55
12020007	3	3	1	3	3	5	1	3	3	2	1	3	4	1	3	1	1	3	3	3	1	3	5	59
12030101	1	3	2	4	3	5	1	3	2	1	1	3	4	1	3	3	1	5	5	1	1	3	5	61
12030102	3	4	3	4	3	5	1	3	3	1	1	2	4	1	4	3	1	5	5	1	1	3	5	66
12030103	3	4	3	5	3	5	1	1	3	1	1	3	4	1	4	3	1	5	5	1	1	3	5	66
12030104	3	4	3	5	3	5	1	3	3	1	1	3	4	1	3	3	1	5	5	1	1	3	5	67
12030105	2	4	3	4	3	5	1	1	3	1	1	3	4	1	4	3	1	5	5	5	1	3	5	68
12030106	3	4	3	5	3	5	1	3	3	1	1	3	4	1	3	3	1	5	5	1	1	3	5	67
12030107	1	3	3	5	3	5	1	3	3	1	1	3	4	1	3	3	1	5	5	1	1	3	5	64

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
12030108	1	3	3	3	3	3	1	1	3	1	1	2	4	1	2	3	1	5	5	3	1	3	5	58
12030109	1	3	3	4	3	5	1	1	3	1	1	2	4	1	3	3	1	5	5	1	1	3	5	60
12030201	1	3	1	3	3	5	1	3	3	1	1	3	4	1	2	3	1	5	5	1	1	3	5	59
12030202	1	3	2	3	3	3	1	3	3	2	1	2	4	1	2	3	1	5	5	1	1	3	5	58
12030203	4	3	1	4	3	5	1	3	3	2	1	2	4	1	4	3	1	5	5	1	1	3	5	65
12040101	3	4	2	5	3	5	1	1	3	2	1	2	4	1	4	1	5	5	3	3	1	3	5	67
12040102	4	4	2	5	3	5	1	1	3	2	1	2	4	1	5	1	5	5	3	5	1	3	5	71
12040103	3	3	2	5	3	5	1	1	3	2	1	2	4	1	4	1	5	5	3	3	1	3	5	66
12040104	4	4	2	3	3	5	1	3	3	2	1	2	4	1	5	1	5	5	3	5	1	3	5	71
12040201	3	3	1	2	3	5	1	3	3	2	1	2	4	1	4	1	5	5	3	3	1	3	5	64
12040202	4	3	1	3	3	3	1	3	3	2	1	2	4	1	4	1	5	5	3	1	1	3	5	62
12040203	4	4	1	3	3	5	1	3	3	2	1	2	4	1	4	1	5	5	3	3	1	3	5	67
12040204	4	4	2	3	3	3	1	3	3	2	2	2	4	1	5	1	5	5	3	5	1	3	5	70
12040205	4	4	3	5	3	5	1	1	3	2	1	2	4	1	4	1	5	5	3	3	1	3	5	69
12050001	1	3	1	1	3	5	1	3	2	1	1	2	2	1	2	5	5	3	5	3	1	3	1	55
12050002	1	3	2	1	3	5	1	3	2	1	1	2	3	1	3	5	5	3	5	3	1	3	3	60
12050003	1	3	2	2	3	5	1	3	2	1	1	2	4	1	3	5	5	3	5	3	1	3	5	64
12050004	1	2	2	1	3	5	1	3	2	1	1	2	4	1	2	5	5	3	5	3	1	3	5	61
12050005	1	3	1	1	3	3	1	3	2	1	1	3	3	1	4	5	5	3	5	3	1	3	3	59
12050006	1	3	1	1	3	5	1	3	2	1	1	2	4	1	3	5	5	3	5	3	1	3	5	62
12050007	1	2	1	1	3	5	1	3	2	1	1	2	4	1	2	5	5	3	5	3	1	3	5	60

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
12060101	1	1	1	1	3	5	1	1	2	1	1	2	4	1	2	5	1	3	5	3	3	3	5	55
12060102	1	3	1	1	3	5	1	3	2	1	1	1	4	1	3	5	1	3	5	1	1	3	5	55
12060103	1	2	1	1	3	3	1	3	2	1	1	2	4	1	3	5	1	3	5	1	1	3	5	53
12060104	1	2	1	1	3	1	1	3	2	1	1	2	4	1	3	5	1	3	5	3	3	3	5	55
12060105	1	2	1	2	3	3	1	3	2	1	1	1	4	1	3	5	1	3	5	3	1	3	5	55
12060201	1	3	2	3	3	5	1	3	2	1	1	2	4	1	2	5	1	3	5	1	1	3	5	58
12060202	1	3	2	3	3	5	1	3	3	1	1	2	4	1	3	5	1	3	5	1	1	3	5	60
12060203	1	3	1	3	3	5	1	3	3	1	1	2	4	1	3	5	1	3	5	3	1	3	5	61
12060204	1	3	1	3	3	5	1	3	3	1	1	2	4	1	3	5	1	3	5	3	1	3	5	61
12070101	1	3	2	2	3	5	1	3	3	1	1	2	4	1	2	3	3	3	5	1	1	3	5	58
12070102	1	3	1	3	3	5	1	1	3	1	1	2	4	1	3	3	3	3	5	1	3	3	5	59
12070103	1	3	2	3	3	5	1	3	3	1	1	2	4	1	2	3	3	3	5	1	1	3	5	59
12070104	3	3	2	5	3	5	1	3	3	2	1	2	4	1	4	3	3	3	5	5	1	3	5	70
12070201	1	3	1	2	3	5	1	3	3	1	1	1	4	1	3	3	3	3	5	3	1	3	5	59
12070202	1	3	1	3	3	5	1	3	3	2	1	1	4	1	2	3	3	3	5	3	1	3	5	60
12070203	1	3	1	5	3	5	1	1	3	2	1	1	4	1	2	3	3	3	5	1	1	3	5	58
12070204	1	3	2	3	3	5	1	3	3	1	1	2	4	1	3	3	3	3	5	1	1	3	5	60
12070205	1	3	3	5	3	5	1	3	3	2	1	1	4	1	2	3	3	3	5	1	1	3	5	62

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
12080001	1	2	2	1	3	3	1	3	2	1	1	2	3	1	2	5	5	3	5	3	3	3	3	58
12080002	1	3	1	1	3	3	1	3	2	1	1	2	4	1	2	5	5	3	5	3	1	3	5	59
12080003	1	2	2	1	3	3	1	3	2	1	1	3	3	1	2	5	5	3	5	3	3	3	3	59
12080004	1	3	2	1	3	5	1	3	2	1	1	3	4	1	2	5	5	3	5	3	1	3	3	61
12080005	1	3	2	1	3	5	1	3	2	1	1	4	4	1	2	5	5	3	5	3	1	3	5	64
12080006	1	3	2	1	3	3	1	3	2	1	1	3	3	1	2	5	5	3	5	3	1	3	3	58
12080007	1	3	1	2	3	3	1	3	3	1	1	2	4	1	2	5	5	3	5	3	1	3	5	61
12080008	1	2	1	2	3	3	1	1	3	2	1	2	4	1	2	5	5	3	5	3	1	3	5	59
12090101	1	3	1	1	3	5	1	1	3	1	1	1	4	1	3	3	5	3	5	1	1	3	5	56
12090102	1	3	1	1	3	5	1	1	3	2	1	1	4	1	2	3	5	3	5	1	1	3	5	56
12090103	1	2	1	1	3	5	1	3	3	2	1	2	4	1	2	3	5	3	5	3	1	3	5	60
12090104	1	3	2	1	3	5	1	3	3	2	1	2	4	1	2	3	5	3	5	3	1	3	5	62
12090105	1	3	1	2	3	5	1	1	3	2	1	1	4	1	3	3	5	3	5	3	3	3	5	62
12090106	1	2	1	1	3	3	1	1	3	2	1	1	4	1	2	3	5	3	5	3	3	3	5	57
12090107	1	3	1	2	3	5	1	3	3	2	1	1	4	1	3	3	5	3	5	1	1	3	5	60
12090108	1	3	1	1	3	5	1	3	3	2	1	1	4	1	2	3	5	3	5	3	1	3	5	60
12090109	1	1	1	1	3	3	1	3	3	2	1	1	4	1	2	3	5	3	5	3	1	3	5	56
12090110	1	1	1	2	3	3	1	3	3	2	1	1	4	1	2	3	5	3	5	3	3	3	5	59
12090201	1	3	1	4	3	3	1	3	3	2	1	1	4	1	2	3	5	3	5	1	3	3	5	61
12090202	1	1	2	2	3	1	1	3	3	2	1	1	4	1	1	3	5	3	5	3	1	3	5	55
12090203	1	1	1	1	3	1	1	3	3	2	1	1	4	1	1	3	5	3	5	3	1	3	5	53

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
12090204	1	3	2	3	3	1	1	3	3	2	1	1	4	1	1	3	5	3	5	3	1	3	5	58
12090205	1	4	2	5	3	5	1	3	3	2	1	1	4	1	3	3	5	3	5	3	1	3	5	67
12090206	1	3	1	4	3	5	1	1	3	2	1	1	4	1	2	3	5	3	5	3	1	3	5	61
12090301	1	3	2	5	3	5	1	3	3	1	1	2	4	1	2	3	5	3	5	3	1	3	5	65
12090302	1	3	2	2	3	3	1	3	3	2	1	2	4	1	3	3	5	3	5	5	1	3	5	64
12090401	3	3	3	3	3	5	1	3	3	2	1	2	4	1	4	3	5	3	5	3	1	3	5	69
12090402	2	3	2	2	3	5	1	1	3	2	1	2	4	1	3	3	5	3	5	1	3	3	5	63
12100101	1	3	2	2	3	5	1	3	3	1	1	2	4	1	3	3	5	5	5	5	1	3	5	67
12100102	1	3	2	2	3	3	1	1	3	2	1	2	4	1	3	3	5	5	5	3	1	3	5	62
12100201	1	3	1	5	3	5	1	3	3	2	1	1	4	1	2	3	5	5	5	1	1	3	5	64
12100202	1	3	2	3	3	5	1	3	3	1	1	3	4	1	2	3	5	5	5	1	1	3	5	64
12100203	1	3	2	5	3	3	1	5	3	2	2	2	4	1	2	3	5	5	5	1	1	3	5	67
12100301	1	4	2	3	3	5	1	3	3	1	1	3	4	1	3	3	5	5	5	3	1	3	5	68
12100302	1	4	1	5	3	5	1	3	3	2	1	3	4	1	2	3	5	5	5	1	1	3	5	67
12100303	1	3	1	3	3	5	1	3	2	2	1	3	4	1	2	3	5	5	5	3	1	3	5	65
12100304	1	4	1	5	3	5	1	3	3	2	1	3	4	1	2	3	5	5	5	3	1	3	5	69
12100401	1	3	1	2	3	3	1	3	3	2	1	2	4	1	3	3	5	5	5	3	3	3	5	65
12100402	1	3	1	2	3	5	1	1	3	2	1	2	4	1	2	3	5	5	5	3	3	3	5	64

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
12100403	1	3	1	1	3	5	1	1	3	2	2	1	4	1	3	3	5	5	5	3	3	3	5	64
12100404	1	3	1	2	3	3	1	1	3	2	2	2	4	1	2	3	5	5	5	3	3	3	5	63
12100405	1	3	1	2	3	5	1	3	3	2	2	2	4	1	2	3	5	5	5	1	1	3	5	63
12100406	1	3	1	3	3	3	1	3	3	2	1	3	4	1	2	3	5	5	5	5	1	3	5	66
12100407	1	3	1	3	3	5	1	3	3	2	1	3	4	1	2	3	5	5	5	3	1	3	5	66
12110101	1	2	1	2	3	1	1	3	3	2	1	1	4	1	2	3	5	5	5	3	3	3	5	60
12110102	1	1	1	1	3	1	1	3	3	2	1	1	4	1	1	3	5	5	5	3	3	3	5	57
12110103	1	3	3	2	3	5	1	3	2	1	1	1	4	1	1	3	5	5	5	3	1	3	5	62
12110104	1	3	2	2	3	3	1	3	2	1	1	1	4	1	1	3	5	5	5	3	3	3	5	61
12110105	1	3	1	3	3	5	1	1	2	1	1	2	4	1	1	3	5	5	5	1	1	3	5	58
12110106	1	3	2	3	3	3	1	1	3	2	1	1	4	1	2	3	5	5	5	1	1	3	5	59
12110107	1	3	1	5	3	3	1	3	3	2	1	2	4	1	2	3	5	5	5	3	1	3	5	65
12110108	1	1	1	2	3	3	1	3	2	1	1	3	4	1	1	3	5	5	5	1	1	3	5	56
12110109	1	3	1	3	3	5	1	3	2	1	1	3	4	1	2	3	5	5	5	1	1	3	5	62
12110110	1	3	2	4	3	5	1	3	2	1	1	3	4	1	2	3	5	5	5	3	1	3	5	66
12110111	1	3	1	3	3	5	1	3	2	2	1	3	4	1	2	3	5	5	5	3	1	3	5	65
12110201	1	3	1	3	3	5	1	3	3	2	2	2	4	1	2	3	5	5	5	3	1	3	5	66
12110202	1	4	1	2	3	5	1	3	3	2	1	1	4	1	4	3	5	5	5	3	1	3	5	66
12110203	1	3	1	2	3	5	1	1	3	2	1	2	4	1	2	3	5	5	5	3	1	3	5	62
12110204	1	3	1	2	3	5	1	1	3	2	1	2	4	1	2	3	5	5	5	1	1	3	5	60
12110205	1	3	1	2	3	5	1	1	3	2	1	2	4	1	2	3	5	5	5	1	1	3	5	60

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
12110206	1	3	2	2	3	5	1	3	2	1	1	2	4	1	1	3	5	5	5	3	3	3	5	64
12110207	1	3	2	2	3	5	1	3	2	2	1	1	4	1	1	3	5	5	5	3	3	3	5	64
12110208	1	4	1	4	3	5	1	3	2	2	1	1	4	1	3	3	5	5	5	3	5	3	5	70
13010001	1	1	1	5	3	1	1	3	3	2	1	5	1	1	1	1	5	3	5	1	5	3	3	56
13010002	1	2	1	3	3	1	1	3	3	2	1	5	1	1	1	1	5	3	5	3	3	3	3	55
13010003	1	2	3	4	3	1	1	3	3	2	1	5	1	1	1	1	5	3	5	3	3	3	3	58
13010004	1	1	3	5	3	1	1	3	3	2	1	5	1	1	1	1	5	3	5	3	5	3	3	60
13010005	1	2	2	3	3	1	1	3	3	2	1	5	1	1	1	1	5	3	5	3	5	3	3	58
13020101	1	3	1	3	3	5	1	1	3	2	1	5	1	1	1	5	5	3	5	1	1	3	1	56
13020102	1	2	1	3	3	5	1	3	3	2	1	5	1	1	1	5	5	3	5	5	3	3	1	63
13020201	1	3	1	4	3	5	1	3	3	2	1	5	1	1	1	5	5	3	5	5	1	3	1	63
13020202	1	3	1	5	3	5	1	3	3	2	1	5	1	1	1	5	5	3	5	5	1	3	1	64
13020203	1	3	1	3	3	5	1	3	3	2	1	5	1	1	1	5	5	3	5	5	1	3	1	62
13020204	1	3	1	4	3	5	1	3	3	2	1	5	1	1	1	5	5	3	5	5	1	3	1	63
13020205	1	3	1	3	3	5	1	3	3	2	1	5	1	1	1	5	5	3	5	3	1	3	1	60
13020206	1	1	1	3	3	1	1	3	3	2	1	5	1	1	1	5	5	3	5	3	1	3	1	54
13020207	1	2	1	3	3	5	1	1	3	2	1	5	1	1	1	5	5	3	5	5	1	3	1	59
13020208	1	1	1	3	3	1	1	1	3	2	1	5	1	1	1	5	5	3	5	3	3	3	1	54

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
13020209	1	1	1	3	3	3	1	3	3	2	1	5	1	1	1	5	5	3	5	3	1	3	1	56
13020210	1	1	1	3	3	3	1	1	3	2	1	5	1	1	1	5	5	3	5	3	1	3	1	54
13020211	1	1	1	3	3	1	1	1	3	2	1	5	1	1	1	5	5	3	5	5	1	3	1	54
13030101	1	1	1	3	3	3	1	3	3	2	1	5	1	1	1	5	5	3	5	3	1	3	1	56
13030102	3	3	1	3	3	5	1	1	2	2	1	5	2	1	1	5	5	3	5	5	1	3	1	62
13030103	3	3	1	3	3	5	1	3	2	2	1	5	1	1	1	5	5	3	5	3	1	3	1	61
13030201	1	1	1	1	3	1	1	3	2	1	1	5	1	1	1	5	5	3	5	3	1	3	1	50
13030202	2	3	1	3	3	5	1	3	3	2	1	5	1	1	1	5	5	3	5	5	1	3	1	63
13040100	3	4	1	3	3	5	1	3	2	2	1	5	4	1	1	5	5	3	5	1	1	3	5	67
13040201	1	1	1	3	3	1	1	3	2	2	1	5	4	1	1	5	5	3	5	3	1	3	5	60
13040202	1	1	2	3	3	1	1	1	2	2	1	5	4	1	1	5	5	3	5	3	3	3	5	61
13040203	1	1	2	3	3	1	1	1	2	2	1	5	4	1	1	5	5	3	5	3	5	3	5	63
13040204	1	1	2	3	3	1	1	1	2	2	1	5	4	1	1	5	5	3	5	3	3	3	5	61
13040205	1	1	1	2	3	1	1	1	2	2	1	5	4	1	1	5	5	3	5	3	5	3	5	61
13040206	1	1	2	2	3	1	1	3	2	2	1	5	4	1	1	5	5	3	5	3	3	3	5	62
13040207	1	1	2	2	3	1	1	3	2	2	1	5	4	1	1	5	5	3	5	3	5	3	5	64
13040208	1	1	3	1	3	1	1	1	2	2	1	4	4	1	1	5	5	3	5	3	3	3	5	59
13040209	1	1	3	2	3	1	1	3	2	2	1	5	4	1	1	5	5	3	5	3	3	3	5	63
13040210	1	1	3	1	3	1	1	3	2	2	1	3	4	1	1	5	5	3	5	3	3	3	5	60
13040211	1	1	2	1	3	1	1	3	2	2	1	3	4	1	1	5	5	3	5	3	3	3	5	59
13040212	1	3	2	3	3	1	1	3	2	2	1	1	4	1	2	5	5	3	5	3	3	3	5	62

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
13040301	1	1	1	1	3	3	1	3	3	2	1	1	4	1	2	5	5	3	5	3	1	3	5	58
13040302	1	3	3	3	3	1	1	3	3	2	1	1	4	1	2	5	5	3	5	3	3	3	5	64
13040303	1	2	1	1	3	1	1	3	3	2	1	1	4	1	2	5	5	3	5	3	3	3	5	59
13050001	1	3	1	5	3	5	1	3	3	1	1	5	1	1	1	5	5	1	5	3	1	3	1	59
13050002	1	1	1	5	3	3	1	3	2	1	1	5	1	1	1	5	5	1	5	3	1	3	1	54
13050003	2	3	1	3	3	5	1	5	3	2	1	5	1	1	1	5	5	1	5	3	1	3	1	61
13050004	1	1	1	2	3	3	1	1	2	2	1	5	3	1	1	5	5	1	5	3	1	3	3	54
13060001	1	2	2	3	3	5	1	3	2	1	1	5	1	1	1	5	5	1	5	3	1	3	1	56
13060002	1	1	1	4	3	3	1	1	2	1	1	5	1	1	1	5	5	1	5	3	1	3	1	51
13060003	1	1	1	2	3	1	1	3	2	1	1	3	1	1	1	5	5	1	5	5	1	3	1	49
13060004	1	1	1	1	3	1	1	3	2	1	1	3	1	1	2	5	5	1	5	3	1	3	1	47
13060005	1	2	1	4	3	1	1	1	3	2	1	3	1	1	1	5	5	1	5	3	5	3	1	54
13060006	1	1	1	5	3	1	1	3	3	2	1	3	1	1	1	5	5	1	5	3	3	3	1	54
13060007	1	2	1	2	3	1	1	5	2	1	1	3	1	1	1	5	5	1	5	5	5	3	1	56
13060008	1	2	1	4	3	1	1	3	3	2	1	4	1	1	1	5	5	1	5	5	5	3	1	59
13060009	1	2	1	3	3	1	1	3	3	2	1	3	1	1	1	5	5	1	5	3	5	3	1	55
13060010	1	2	1	2	3	1	1	1	3	2	1	4	1	1	1	5	5	1	5	5	5	3	1	55
13060011	1	2	1	1	3	1	1	5	2	2	1	4	1	1	2	5	5	1	5	3	5	3	1	56

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
13070001	1	1	1	1	3	3	1	3	2	2	1	4	4	1	2	5	5	3	5	3	1	3	5	60
13070002	1	1	1	1	3	1	1	1	3	2	1	4	4	1	1	5	5	3	5	3	3	3	5	58
13070003	1	1	2	1	3	1	1	3	2	2	1	5	4	1	2	5	5	3	5	3	1	3	5	60
13070004	1	1	1	1	3	1	1	3	2	2	1	5	4	1	1	5	5	3	5	3	1	3	5	58
13070005	1	1	1	2	3	1	1	1	2	2	1	5	4	1	1	5	5	3	5	3	1	3	5	57
13070006	1	1	1	2	3	1	1	3	2	2	1	5	4	1	1	5	5	3	5	3	1	3	5	59
13070007	1	3	2	1	3	5	1	1	2	1	1	4	3	1	2	5	5	3	5	3	1	3	3	59
13070008	1	1	1	1	3	3	1	3	2	2	1	2	4	1	2	5	5	3	5	1	1	3	5	56
13070009	1	1	1	2	3	1	1	3	2	2	1	3	4	1	2	5	5	3	5	3	1	3	5	58
13070010	1	1	2	1	3	1	1	3	2	2	1	3	4	1	1	5	5	3	5	3	1	3	5	57
13070011	1	1	1	1	3	1	1	3	2	2	1	2	4	1	1	5	5	3	5	3	1	3	5	55
13080001	1	3	1	3	3	1	1	3	2	2	1	1	4	1	1	5	5	3	5	5	3	3	5	62
13080002	1	3	1	4	3	5	1	3	2	1	1	1	4	1	1	5	5	3	5	1	1	3	5	60
13080003	1	3	1	4	3	5	1	3	2	1	1	1	4	1	1	5	5	3	5	3	1	3	5	62
13090001	1	3	1	3	3	5	1	3	2	1	1	1	4	1	1	5	5	1	5	3	5	3	5	63
13090002	1	4	1	4	3	5	1	3	2	2	1	1	4	1	3	3	5	5	5	5	5	3	5	72
14010001	1	2	1	5	3	3	1	3	3	2	1	5	1	1	1	3	1	3	3	1	1	3	3	51
14010002	1	3	1	5	3	1	1	3	3	2	1	5	1	1	1	3	1	3	3	1	1	3	3	50
14010003	1	3	1	5	3	1	1	1	3	2	1	5	1	1	1	3	1	3	3	1	1	3	3	48
14010004	3	3	1	3	3	5	1	1	3	2	1	5	1	1	1	3	1	3	3	1	1	3	3	52
14010005	1	3	2	5	3	5	1	3	3	3	1	5	1	1	1	3	1	3	3	1	1	3	3	56

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
14010006	1	3	2	5	3	5	1	3	5	5	1	5	1	1	1	3	1	3	3	3	1	3	3	62
14020001	1	1	1	3	3	1	1	3	3	2	1	5	1	1	1	3	1	3	3	1	3	3	3	48
14020002	1	1	1	4	3	3	1	1	3	2	1	5	1	1	1	3	1	3	3	1	3	3	3	49
14020003	1	1	2	5	3	1	1	1	3	2	1	5	1	1	1	3	1	3	3	1	5	3	3	51
14020004	1	3	1	3	3	5	1	3	3	2	1	5	1	1	1	3	1	3	3	1	3	3	3	54
14020005	1	3	2	4	3	5	1	3	3	2	1	5	1	1	1	3	1	3	3	1	1	3	3	54
14020006	1	2	1	5	3	3	1	3	3	2	1	5	1	1	1	3	1	3	3	1	3	3	3	53
14030001	1	2	1	3	3	5	2	1	3	4	1	5	1	1	1	1	1	3	5	3	1	3	3	54
14030002	1	2	1	4	3	3	1	3	3	2	1	5	1	1	1	1	1	3	5	1	3	3	3	52
14030003	1	2	1	5	3	5	1	3	3	2	1	5	1	1	1	1	1	3	5	1	3	3	3	55
14030004	1	3	1	3	3	5	1	1	3	3	1	5	1	1	1	1	1	3	5	5	1	3	3	55
14030005	1	1	1	2	3	3	2	1	3	3	1	4	1	1	1	1	1	3	5	1	1	3	3	46
14040101	1	1	2	3	5	1	1	3	3	2	1	5	1	1	1	3	1	1	5	1	3	1	1	47
14040102	1	1	2	3	5	1	1	1	3	2	1	5	1	1	1	3	1	1	5	3	5	1	1	49
14040103	1	1	2	1	5	1	1	3	3	2	1	5	1	1	1	3	1	1	5	3	1	1	1	45
14040104	1	1	2	2	5	1	1	1	3	2	1	5	1	1	1	3	1	1	5	3	1	1	1	44
14040105	1	1	2	1	5	1	1	3	3	2	1	5	1	1	1	3	1	1	5	3	1	1	1	45
14040106	1	1	1	3	3	1	1	3	3	3	1	5	1	1	1	3	1	1	5	3	1	1	1	45

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
14040107	1	2	2	2	5	1	1	3	3	2	1	5	1	1	1	3	1	1	5	3	1	1	1	47
14040108	1	2	2	2	5	1	1	3	3	2	1	5	1	1	1	3	1	1	5	3	1	1	1	47
14040109	1	1	2	2	5	1	1	3	3	2	1	5	1	1	1	3	1	1	5	3	3	1	1	48
14040200	1	1	2	1	5	3	1	1	3	2	1	5	1	1	1	3	1	1	5	3	1	1	1	45
14050001	3	2	1	3	3	1	1	3	3	2	1	4	1	1	1	3	1	3	5	1	3	3	3	52
14050002	1	1	2	3	3	1	1	3	3	2	1	5	1	1	1	3	1	3	5	1	3	3	3	51
14050003	1	1	2	2	3	1	1	3	3	2	1	5	1	1	1	3	1	3	5	3	1	1	1	46
14050004	1	1	2	1	5	1	1	3	3	2	1	5	1	1	1	3	1	3	5	5	1	1	1	49
14050005	1	1	2	2	3	1	1	3	3	3	1	5	1	1	1	3	1	3	5	1	1	3	3	49
14050006	1	1	1	1	3	3	1	3	4	5	1	5	1	1	1	3	1	3	5	1	1	3	3	52
14050007	1	1	2	2	3	3	1	3	4	4	1	5	1	1	1	3	1	3	5	1	1	3	3	53
14060001	1	1	2	3	3	1	2	3	3	2	1	5	1	1	1	3	1	5	5	3	5	3	3	58
14060002	1	1	2	3	3	1	2	3	3	3	1	5	1	1	1	3	1	5	5	3	3	3	3	57
14060003	1	1	2	3	3	3	2	3	3	3	1	5	1	1	1	3	1	5	5	3	3	3	3	59
14060004	1	2	2	5	3	5	2	3	4	4	1	5	1	1	1	3	1	5	5	3	3	3	3	66
14060005	1	2	1	2	3	3	2	3	4	5	1	5	1	1	1	3	1	5	5	3	1	3	3	59
14060006	1	1	1	3	3	3	2	3	4	5	1	5	1	1	1	3	1	5	5	3	1	3	3	59
14060007	1	3	1	2	3	5	2	3	4	4	1	5	1	1	1	3	1	5	5	5	1	3	3	63
14060008	1	1	1	3	3	1	2	3	3	3	1	5	1	1	1	3	1	5	5	3	1	3	3	54
14060009	1	1	1	2	3	3	2	3	3	3	1	5	1	1	1	3	1	5	5	3	1	3	3	55
14070001	1	1	1	2	3	5	2	3	3	3	1	5	1	1	1	3	1	1	5	3	5	3	3	57

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
14070002	1	1	1	2	3	1	2	3	3	3	1	5	1	1	1	3	1	1	5	5	1	3	3	51
14070003	1	1	1	3	3	1	2	3	4	4	1	5	1	1	1	3	1	1	5	5	1	3	3	54
14070004	1	1	1	3	3	1	2	3	3	3	1	5	1	1	1	3	1	1	5	3	3	3	3	52
14070005	1	1	1	3	3	5	2	3	3	3	1	5	1	1	1	3	1	1	5	5	3	3	3	58
14070006	1	1	1	3	3	5	2	1	3	3	1	5	1	1	1	3	1	1	5	5	5	3	5	60
14070007	1	1	1	3	3	5	2	3	3	3	1	5	1	1	1	3	1	1	5	5	3	3	3	58
14080101	1	3	1	5	3	3	1	3	3	2	1	5	1	1	1	3	1	3	5	3	5	3	1	58
14080102	1	1	1	5	3	1	1	1	3	2	1	5	1	1	1	3	1	3	5	3	5	3	3	54
14080103	1	3	1	3	3	5	1	3	3	2	1	5	1	1	1	3	1	3	5	3	5	3	1	58
14080104	1	3	3	3	3	1	1	3	3	2	1	5	1	1	1	3	1	3	5	3	5	3	3	58
14080105	1	3	2	3	3	1	1	3	3	3	1	4	1	1	1	3	1	3	5	5	5	3	1	57
14080106	1	3	2	3	3	5	1	3	3	3	1	5	1	1	1	3	1	3	5	3	1	3	1	56
14080107	1	3	1	3	3	1	1	3	3	3	1	4	1	1	1	3	1	3	5	1	5	3	3	54
14080201	1	1	1	2	3	1	2	1	3	3	1	4	1	1	1	3	1	3	5	5	5	3	3	54
14080202	1	2	1	3	3	1	1	1	3	3	1	4	1	1	1	3	1	3	5	3	5	3	3	53
14080203	1	1	1	3	3	1	1	3	3	3	1	4	1	1	1	3	1	3	5	5	5	3	3	56
14080204	1	2	1	3	3	3	2	3	3	3	1	4	1	1	1	3	1	3	5	3	3	3	5	58
14080205	1	1	1	3	3	5	2	3	3	3	1	5	1	1	1	3	1	3	5	3	5	3	3	60

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
15010001	1	2	1	3	3	5	2	3	3	3	1	5	1	1	1	5	5	3	5	3	3	3	5	67
15010002	1	2	1	4	3	5	2	3	3	3	1	5	1	1	1	5	5	3	5	5	3	3	5	70
15010003	1	2	1	3	3	5	2	1	3	3	1	5	1	1	1	5	5	3	5	3	3	3	5	65
15010004	1	2	1	3	3	5	2	3	3	3	1	5	1	1	1	5	5	3	5	3	1	3	5	65
15010005	3	3	1	5	3	5	1	3	3	4	1	5	1	1	1	5	5	3	5	5	1	3	5	72
15010006	1	3	1	5	3	5	2	3	3	4	1	5	1	1	1	5	5	3	5	3	1	3	5	69
15010007	1	3	1	5	3	5	2	1	3	4	1	5	1	1	1	5	5	3	5	3	1	3	5	67
15010008	1	3	1	5	3	5	2	1	3	3	1	5	1	1	1	5	5	3	5	1	1	3	3	62
15010009	1	3	1	5	3	5	2	1	3	3	1	5	1	1	1	5	5	3	5	3	1	3	5	66
15010010	2	3	1	5	3	5	1	5	3	4	1	5	1	1	1	5	5	3	5	5	1	3	3	71
15010011	1	1	1	4	3	5	1	3	3	3	1	5	1	1	1	5	5	3	5	3	3	3	3	64
15010012	3	3	1	5	3	5	1	1	4	4	1	5	1	1	1	5	5	3	5	3	1	3	3	67
15010013	1	2	2	3	3	5	1	1	3	3	1	5	1	1	1	5	5	3	5	3	1	3	3	61
15010014	1	3	1	5	3	5	2	3	4	4	1	5	1	1	1	5	5	3	5	5	1	3	5	72
15010015	4	3	1	5	3	5	1	3	4	4	1	5	1	1	1	5	5	3	5	3	1	3	3	70
15020001	1	1	1	2	3	1	2	5	3	2	1	5	1	1	1	3	5	1	5	5	5	3	5	62
15020002	1	2	1	3	3	1	2	3	3	2	1	4	1	1	1	3	5	1	5	3	1	3	5	55
15020003	1	1	1	3	3	1	1	3	3	2	1	5	1	1	1	3	5	1	5	5	3	3	1	54
15020004	1	2	1	3	3	1	1	1	3	3	1	5	1	1	1	3	5	1	5	5	1	3	1	52
15020005	1	2	1	3	3	3	2	3	3	2	1	5	1	1	1	3	5	1	5	3	1	3	5	58
15020006	1	2	1	2	3	1	1	3	3	2	1	5	1	1	1	3	5	1	5	5	1	3	1	52

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
15020007	1	2	1	3	3	1	2	3	3	3	1	4	1	1	1	3	5	1	5	5	1	3	5	58
15020008	1	2	1	3	3	5	2	3	3	3	1	5	1	1	1	3	5	1	5	3	1	3	5	61
15020009	1	2	1	3	3	1	2	3	3	3	1	4	1	1	1	3	5	1	5	3	1	3	5	56
15020010	1	2	1	3	3	5	2	3	3	2	1	5	1	1	1	3	5	1	5	3	1	3	5	60
15020011	1	2	1	3	3	3	2	3	3	3	1	4	1	1	1	3	5	1	5	3	1	3	5	58
15020012	1	2	1	3	3	5	2	3	3	3	1	4	1	1	1	3	5	1	5	3	1	3	5	60
15020013	1	2	1	3	3	5	2	3	3	3	1	4	1	1	1	3	5	1	5	3	3	3	5	62
15020014	1	2	1	3	3	5	2	3	3	3	1	4	1	1	1	3	5	1	5	3	1	3	5	60
15020015	1	2	1	3	3	5	2	3	3	2	1	5	1	1	1	3	5	1	5	3	1	3	5	60
15020016	1	2	1	3	3	5	2	3	3	3	1	5	1	1	1	3	5	1	5	5	1	3	5	63
15020017	1	2	1	3	3	5	2	3	3	3	1	5	1	1	1	3	5	1	5	3	1	3	5	61
15020018	1	2	1	3	3	5	2	3	3	3	1	5	1	1	1	3	5	1	5	3	3	3	5	63
15030101	3	3	2	5	3	5	2	5	3	4	1	5	2	1	1	5	5	1	5	3	1	3	5	73
15030102	4	3	3	5	3	5	2	1	4	4	1	5	2	1	1	5	5	1	5	3	1	3	5	72
15030103	1	3	1	5	3	5	2	1	3	4	1	5	1	1	1	5	5	1	5	3	1	3	5	65
15030104	3	3	1	4	3	5	2	3	2	1	1	5	2	1	1	5	5	1	5	5	1	3	5	67
15030105	1	1	1	4	3	5	2	3	2	1	1	4	1	1	1	5	5	1	5	3	1	3	5	59
15030106	2	3	1	4	3	5	2	1	2	1	1	5	1	1	1	5	5	1	5	3	1	3	5	61

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
15030107	3	3	1	3	3	5	2	3	2	1	1	5	2	1	1	5	5	1	5	5	1	3	5	66
15030108	3	3	1	5	3	5	2	3	2	1	1	5	1	1	1	5	5	1	5	3	1	3	5	65
15030201	1	3	1	5	3	5	2	5	2	2	1	5	1	1	1	5	5	1	5	5	1	3	5	68
15030202	1	3	1	5	3	5	2	3	2	1	1	5	1	1	1	5	5	1	5	3	1	3	5	63
15030203	1	3	1	5	3	5	2	5	2	1	1	5	1	1	1	5	5	1	5	3	3	3	5	67
15030204	1	2	1	5	3	5	2	3	3	2	1	4	1	1	1	5	5	1	5	5	1	3	5	65
15040001	1	1	1	3	3	1	1	3	3	2	1	5	1	1	1	3	5	1	5	5	3	3	1	54
15040002	2	1	1	1	3	1	1	3	3	2	1	5	1	1	1	3	5	1	5	5	1	3	1	51
15040003	1	1	1	1	3	1	1	3	3	1	1	5	1	1	1	3	5	1	5	3	1	3	1	47
15040004	1	1	1	3	3	1	1	5	3	2	1	5	1	1	1	3	5	1	5	5	3	3	1	56
15040005	1	2	1	3	3	5	2	5	2	1	1	5	1	1	1	3	5	1	5	3	1	3	5	60
15040006	3	3	1	3	3	1	2	5	2	1	1	5	1	1	1	3	5	1	5	3	1	3	5	59
15040007	3	2	1	3	3	3	2	5	2	1	1	5	1	1	1	3	5	1	5	5	5	3	5	66
15050100	4	3	2	5	3	5	2	5	2	1	1	5	1	1	1	5	5	5	5	3	1	3	5	73
15050201	3	3	1	3	3	3	2	3	2	1	1	5	1	1	1	5	5	5	5	3	1	3	5	65
15050202	3	3	1	3	3	5	2	5	2	1	1	5	1	1	1	5	5	5	5	3	1	3	5	69
15050203	3	3	1	4	3	5	2	5	2	1	1	5	1	1	1	5	5	5	5	3	1	3	5	70
15050301	3	3	1	3	3	5	2	5	2	1	1	5	1	1	1	5	5	5	5	5	1	3	5	71
15050302	3	3	2	3	3	5	2	5	2	1	1	5	1	1	1	5	5	5	5	3	1	3	5	70
15050303	4	3	2	5	3	5	2	3	2	1	1	4	1	1	1	5	5	5	5	3	1	3	5	70
15050304	3	3	2	3	3	5	2	3	2	1	1	5	1	1	1	5	5	5	5	5	1	3	5	70

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
15050305	3	3	2	4	3	5	2	3	2	1	1	5	1	1	1	5	5	5	5	5	1	3	5	71
15050306	4	3	2	5	3	5	2	1	2	1	1	4	1	1	1	5	5	5	5	3	1	3	5	68
15060101	2	2	1	2	3	1	2	5	3	2	1	5	1	1	1	5	5	5	5	3	5	3	5	68
15060102	2	2	1	3	3	1	2	3	3	2	1	5	1	1	1	5	5	5	5	3	5	3	5	67
15060103	3	3	1	3	3	5	2	5	2	1	1	5	1	1	1	5	5	5	5	3	3	3	5	71
15060104	2	2	1	3	3	3	2	3	2	1	1	5	1	1	1	5	5	5	5	5	3	3	5	67
15060105	3	3	1	3	3	5	2	5	2	1	1	5	1	1	1	5	5	5	5	1	3	3	5	69
15060106	4	4	1	5	3	5	2	5	2	1	1	5	1	1	1	5	5	5	5	4	1	3	5	74
15060201	1	3	1	5	3	5	2	3	3	2	1	5	1	1	1	5	5	5	5	3	1	3	5	69
15060202	1	3	1	5	3	5	2	5	3	2	1	5	1	1	1	5	5	5	5	3	1	3	5	71
15060203	3	3	1	5	3	5	2	5	2	1	1	5	1	1	1	5	5	5	5	5	1	3	5	73
15070101	4	4	1	5	3	5	2	3	2	1	1	4	1	1	1	5	5	5	5	5	1	3	5	72
15070102	3	3	1	5	3	5	2	5	2	1	1	5	1	1	1	5	5	5	5	3	1	3	5	71
15070103	3	3	1	5	3	5	2	5	2	1	1	5	1	1	1	5	5	5	5	3	1	3	5	71
15070104	3	3	1	5	3	5	2	1	2	1	1	4	1	1	1	5	5	5	5	3	1	3	5	66
15070201	3	3	1	5	3	5	2	1	2	1	1	5	1	1	1	5	5	5	5	5	1	3	5	69
15070202	4	4	1	5	3	5	2	3	2	1	1	5	1	1	1	5	5	5	5	3	1	3	5	71
15070203	3	3	1	4	3	5	2	1	2	1	1	5	1	1	1	5	5	5	5	3	1	3	5	66

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
15080101	3	3	1	3	3	5	2	3	2	1	1	5	1	1	1	3	5	1	5	3	3	3	5	63
15080102	3	3	1	3	3	5	2	3	2	1	1	5	1	1	1	3	5	1	5	3	3	3	5	63
15080103	3	3	1	5	3	5	2	3	2	1	1	5	1	1	1	3	5	1	5	3	3	3	5	65
15080200	3	3	1	3	3	5	2	5	2	1	1	4	1	1	1	3	5	1	5	3	1	3	5	62
15080301	3	3	1	3	3	1	2	5	2	1	1	5	1	1	1	3	5	1	5	3	1	3	5	59
15080302	3	3	1	3	3	1	2	5	2	1	1	5	1	1	1	3	5	1	5	3	3	3	5	61
15080303	1	1	1	1	3	1	1	3	2	1	1	5	1	1	1	3	5	1	5	3	3	3	1	48
16010101	1	2	2	3	5	3	1	3	3	2	1	5	1	1	1	5	3	3	3	1	1	1	1	52
16010102	1	1	2	3	5	1	1	3	3	3	1	5	1	1	1	5	3	3	3	5	3	1	1	56
16010201	1	1	2	2	3	3	1	3	3	3	1	5	1	1	1	5	3	3	3	5	3	3	1	57
16010202	1	3	1	3	3	5	1	1	3	3	1	5	1	1	1	5	3	3	3	5	1	3	1	57
16010203	1	3	1	3	3	5	2	3	3	3	1	5	1	1	1	5	3	3	3	3	1	3	3	60
16010204	1	2	1	3	3	5	1	3	3	3	1	5	1	1	1	5	3	3	3	5	1	3	1	58
16020101	1	3	1	5	3	5	2	1	3	3	1	5	1	1	1	5	5	3	5	3	1	3	3	64
16020102	2	4	1	4	3	5	2	3	3	3	1	5	1	1	2	5	5	3	5	3	1	3	3	68
16020201	3	3	1	5	3	5	2	1	3	3	1	5	1	1	1	5	5	3	5	1	1	3	3	64
16020202	3	3	1	5	3	5	2	1	3	4	1	5	1	1	1	5	5	3	5	5	1	3	3	69
16020203	2	3	2	5	3	5	2	1	3	3	1	5	1	1	1	5	5	3	5	3	1	3	3	66
16020204	3	4	1	3	3	5	2	3	3	3	1	5	1	1	2	5	5	3	5	3	1	3	3	68
16020301	1	1	1	2	3	1	1	3	2	3	1	5	1	1	1	5	5	3	5	3	3	3	3	57
16020302	1	1	1	3	3	1	2	3	2	3	1	5	1	1	1	5	5	3	5	3	3	3	3	59

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
16020303	1	1	1	3	3	1	2	1	2	3	1	5	1	1	1	5	5	3	5	3	3	3	3	57
16020304	2	2	5	5	3	5	2	3	2	3	1	5	1	1	1	5	5	3	5	3	1	3	3	69
16020305	2	2	5	5	3	3	2	3	2	3	1	5	1	1	1	5	5	3	5	3	1	3	3	67
16020306	2	1	4	5	3	3	2	3	2	3	1	5	1	1	1	5	5	3	5	3	1	3	3	65
16020307	1	1	1	3	3	1	1	3	2	3	1	5	1	1	1	5	5	3	5	3	1	3	3	56
16020308	1	2	3	4	3	3	2	3	2	3	1	5	1	1	1	5	5	3	5	3	1	3	3	63
16020309	1	2	2	3	3	3	1	3	2	3	1	5	1	1	1	5	5	3	5	5	1	3	1	60
16020310	1	3	3	4	3	5	2	1	2	3	1	5	1	1	1	5	5	3	5	3	1	3	3	64
16030001	1	1	1	3	3	5	2	3	5	5	1	5	1	1	1	5	5	3	5	3	1	3	3	66
16030002	1	1	1	3	3	5	2	3	5	5	1	5	1	1	1	5	5	3	5	5	1	3	3	68
16030003	1	2	1	3	3	1	2	3	5	5	1	5	1	1	1	5	5	3	5	3	1	3	3	63
16030004	1	3	1	4	3	3	2	3	5	5	1	5	1	1	1	5	5	3	5	3	1	3	3	67
16030005	1	1	1	3	3	5	2	3	3	4	1	5	1	1	1	5	5	3	5	3	1	3	3	63
16030006	1	3	1	5	3	3	2	3	3	4	1	5	1	1	1	5	5	3	5	3	1	3	3	65
16030007	1	1	1	3	3	1	2	3	3	4	1	5	1	1	1	5	5	3	5	3	1	3	3	59
16030008	1	1	1	2	3	1	2	3	3	3	1	5	1	1	1	5	5	3	5	3	1	3	3	57
16030009	1	1	1	3	3	1	2	3	2	3	1	5	1	1	1	5	5	3	5	3	3	3	3	59
16040101	1	1	1	3	3	1	1	3	2	3	1	5	1	1	1	5	5	1	5	3	1	3	3	54

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
16040102	1	1	1	3	3	1	1	3	3	2	1	5	1	1	1	5	5	1	5	3	1	3	3	54
16040103	1	1	1	3	3	1	1	3	2	3	1	5	1	1	1	5	5	1	5	3	1	3	3	54
16040104	1	1	1	2	3	1	1	3	2	3	1	5	1	1	1	5	5	1	5	3	1	3	3	53
16040105	1	1	1	1	3	1	1	3	2	3	1	5	1	1	1	5	5	1	5	5	1	3	3	54
16040106	1	1	1	2	3	1	1	3	3	2	1	5	1	1	1	5	5	1	5	3	1	3	3	53
16040107	1	1	1	1	3	5	1	3	2	3	1	5	1	1	1	5	5	1	5	3	1	3	3	56
16040108	1	1	1	4	3	3	1	3	2	3	1	5	1	1	1	5	5	1	5	5	1	3	3	59
16040109	1	1	1	2	3	1	1	3	3	2	1	5	1	1	1	5	5	1	5	3	1	3	3	53
16040201	1	1	1	2	3	1	1	3	2	2	1	5	1	1	1	5	5	1	5	3	1	3	3	52
16040202	1	1	1	3	3	5	1	1	2	3	1	5	1	1	1	5	5	1	5	3	1	3	3	56
16040203	3	3	2	4	3	5	1	3	3	2	1	5	1	1	1	5	5	1	5	5	3	3	3	68
16040204	4	3	2	5	3	5	1	1	3	2	1	5	1	1	1	5	5	1	5	3	5	3	3	68
16040205	1	1	1	2	3	5	1	1	3	2	1	5	1	1	1	5	5	1	5	3	5	3	3	59
16050101	4	3	3	5	3	5	2	3	4	5	1	5	2	1	1	5	5	3	5	3	1	3	5	77
16050102	3	3	2	4	3	5	2	3	3	5	1	5	2	1	1	5	5	3	5	3	1	3	5	73
16050103	4	3	2	5	3	5	1	3	2	3	1	5	1	1	1	5	5	3	5	3	1	3	3	68
16050104	1	1	1	5	3	5	1	3	2	3	1	5	1	1	1	5	5	3	5	3	1	3	3	62
16050201	1	3	1	3	3	5	2	3	3	5	1	5	2	1	1	5	5	3	5	5	1	3	5	71
16050202	1	3	1	5	3	3	1	3	2	3	1	5	1	1	1	5	5	3	5	5	1	3	3	64
16050203	1	1	1	4	3	3	1	3	2	3	1	5	1	1	1	5	5	3	5	5	1	3	3	61
16050301	2	2	1	3	3	3	2	1	3	3	1	5	2	1	1	5	5	3	5	5	5	3	5	69

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
16050302	2	3	1	5	3	3	2	3	3	4	1	5	2	1	1	5	5	3	5	5	3	3	5	73
16050303	1	2	1	4	3	3	1	3	2	3	1	5	1	1	1	5	5	3	5	3	3	3	3	62
16050304	1	1	1	1	3	3	1	3	2	3	1	5	1	1	1	5	5	3	5	3	5	3	3	60
16060001	1	1	1	4	3	3	1	3	2	3	1	5	1	1	1	3	5	1	5	3	1	3	3	55
16060002	1	1	1	3	3	5	1	3	2	3	1	5	1	1	1	3	5	1	5	3	3	3	3	58
16060003	1	1	1	5	3	5	1	3	2	3	1	5	1	1	1	3	5	1	5	3	5	3	3	62
16060004	1	1	1	3	3	5	1	3	2	3	1	5	1	1	1	3	5	1	5	3	3	3	3	58
16060005	1	1	1	3	3	5	1	1	2	3	1	5	1	1	1	3	5	1	5	3	3	3	3	56
16060006	1	1	1	3	3	5	1	3	2	3	1	5	1	1	1	3	5	1	5	3	5	3	3	60
16060007	1	1	1	2	3	3	1	3	2	3	1	5	1	1	1	3	5	1	5	3	1	3	3	53
16060008	1	1	1	1	3	3	1	3	2	3	1	5	1	1	1	3	5	1	5	3	1	3	3	52
16060009	1	1	2	3	3	3	1	3	2	3	1	5	1	1	1	3	5	1	5	3	3	3	3	57
16060010	1	1	1	1	3	3	1	3	2	3	1	5	1	1	1	3	5	1	5	3	5	3	3	56
16060011	1	1	1	5	3	5	1	3	2	3	1	5	1	1	1	3	5	1	5	3	5	3	3	62
16060012	1	1	1	5	3	5	1	1	2	3	1	5	1	1	1	3	5	1	5	3	5	3	3	60
16060013	1	1	1	5	3	5	1	3	3	3	1	5	1	1	1	3	5	1	5	3	5	3	3	63
16060014	2	3	1	5	3	5	1	3	3	4	1	5	1	1	1	3	5	1	5	3	3	3	3	65
16060015	4	3	2	5	3	5	2	1	4	4	1	5	2	1	1	3	5	1	5	3	1	3	5	69

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
17010101	3	1	1	2	5	1	1	3	1	1	1	5	1	1	1	1	1	3	1	3	3	1	1	42
17010102	3	2	1	2	5	1	1	1	1	1	1	5	1	1	1	1	1	3	1	5	3	1	1	43
17010103	3	1	1	2	5	1	1	1	1	1	1	5	1	1	1	1	1	3	1	3	5	1	1	42
17010104	1	2	1	3	3	1	1	3	1	1	1	5	1	1	1	1	1	3	1	5	5	1	1	44
17010105	2	2	1	3	3	1	1	3	1	1	1	5	1	1	1	1	1	3	1	5	5	1	1	45
17010201	2	3	1	2	5	5	1	3	2	2	1	5	1	1	1	1	1	3	1	5	1	1	1	49
17010202	1	1	2	3	5	5	1	1	2	2	1	5	1	1	1	1	1	3	1	3	1	1	1	44
17010203	2	3	1	3	5	5	1	1	2	2	1	5	1	1	1	1	1	3	1	3	1	1	1	46
17010204	2	3	1	3	5	5	1	3	1	1	1	5	1	1	1	1	1	3	1	1	1	1	1	44
17010205	2	3	1	4	5	5	1	3	2	2	1	5	1	1	1	1	1	3	1	3	1	1	1	49
17010206	3	3	1	3	5	1	1	1	1	1	1	5	1	1	1	1	1	3	1	3	5	1	1	45
17010207	3	3	1	3	5	1	1	1	1	1	1	5	1	1	1	1	1	3	1	3	3	1	1	43
17010208	3	3	1	3	5	3	1	1	1	1	1	5	1	1	1	1	1	3	1	3	3	1	1	45
17010209	3	3	1	3	5	5	1	1	1	1	1	5	1	1	1	1	1	3	1	3	3	1	1	47
17010210	3	3	1	3	5	1	1	1	1	1	1	5	1	1	1	1	1	3	1	3	5	1	1	45
17010211	3	3	1	3	5	5	1	3	1	1	1	5	1	1	1	1	1	3	1	3	3	1	1	49
17010212	3	3	1	3	5	5	1	1	1	1	1	5	1	1	1	1	1	3	1	3	1	1	1	45
17010213	1	2	1	3	5	3	1	3	1	1	1	5	1	1	1	1	1	3	1	5	1	1	1	44
17010214	3	3	1	4	3	5	1	3	1	1	1	5	1	1	1	1	1	3	1	3	1	1	1	46
17010215	3	3	1	4	3	3	1	1	1	1	1	5	1	1	1	1	1	3	1	3	3	3	1	46
17010216	1	2	1	3	3	3	2	1	1	1	1	5	1	1	1	1	1	3	1	3	3	3	3	45

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
17010301	3	3	1	2	3	1	1	1	1	1	1	5	1	1	1	1	1	3	1	3	1	1	1	38
17010302	3	2	1	1	3	1	1	3	1	1	1	5	1	1	1	1	1	3	1	3	1	1	1	38
17010303	1	3	1	5	3	5	1	3	1	1	1	5	1	1	1	1	1	3	1	5	1	1	1	47
17010304	3	2	1	1	3	3	1	3	1	1	1	5	1	1	1	1	1	3	1	3	1	1	1	40
17010305	3	3	1	4	3	5	1	3	1	1	1	5	1	1	1	1	1	3	1	3	1	3	1	48
17010306	3	3	1	3	3	5	2	1	2	2	1	5	1	1	1	1	1	3	1	5	1	3	3	52
17010307	2	3	1	3	3	5	2	3	2	2	1	5	1	1	1	1	1	3	1	3	1	3	3	51
17010308	3	3	1	3	3	5	2	3	1	1	1	5	1	1	1	1	1	3	1	3	1	3	3	50
17020001	1	2	1	3	3	3	2	3	2	1	1	5	1	1	1	3	1	3	3	3	1	3	3	50
17020002	1	1	1	3	3	1	2	1	1	1	1	5	1	1	1	3	1	3	3	3	5	3	3	48
17020003	1	3	1	3	3	3	2	1	1	1	1	5	1	1	1	3	1	3	3	3	3	3	3	50
17020004	1	1	1	3	3	1	2	3	2	1	1	5	1	1	1	3	1	3	3	3	5	3	3	51
17020005	1	3	1	3	3	1	2	3	2	2	1	5	1	1	1	3	1	3	3	3	3	3	3	52
17020006	1	2	1	3	3	1	2	3	2	1	1	5	1	1	1	3	1	3	3	3	5	3	3	52
17020007	1	2	1	3	3	5	2	1	3	1	1	5	1	1	1	3	1	3	3	3	5	3	3	55
17020008	1	2	1	3	3	5	2	1	3	1	1	5	1	1	1	3	1	3	3	3	5	3	3	55
17020009	1	3	1	3	3	5	2	3	3	3	1	5	1	1	1	3	1	3	3	3	5	3	3	60
17020010	1	3	1	3	3	3	2	3	3	3	1	5	1	1	1	3	1	3	3	3	1	3	3	54

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
17020011	1	3	1	3	3	5	2	3	3	3	1	5	1	1	1	3	1	3	3	3	1	3	3	56
17020012	1	3	1	3	3	1	2	3	3	2	1	5	1	1	1	3	1	3	3	3	1	3	3	51
17020013	1	2	1	3	3	5	2	3	3	2	1	5	1	1	1	3	1	3	3	5	1	3	3	56
17020014	1	3	1	4	3	1	2	3	3	2	1	5	1	1	1	3	1	3	3	3	1	3	3	52
17020015	1	3	1	3	3	3	2	3	3	2	1	5	1	1	1	3	1	3	3	3	1	3	3	53
17020016	1	3	2	3	3	5	2	3	3	2	1	5	1	1	1	3	1	3	3	5	1	3	3	58
17030001	1	3	1	3	3	5	2	3	3	3	1	5	1	1	1	3	1	3	3	3	1	3	3	56
17030002	3	3	1	3	3	5	2	3	4	3	1	5	1	1	1	3	1	3	3	3	1	3	3	59
17030003	3	3	1	3	3	5	2	3	3	2	1	5	1	1	1	3	1	3	3	5	1	3	3	59
17040101	1	1	1	5	5	1	1	3	3	3	1	5	1	1	1	5	5	1	3	3	5	1	1	57
17040102	1	1	1	4	5	1	1	3	3	3	1	5	1	1	1	5	5	1	3	3	5	1	1	56
17040103	1	1	1	4	5	1	1	3	3	3	1	5	1	1	1	5	5	1	3	1	5	1	1	54
17040104	1	3	3	3	3	1	1	3	3	3	1	5	1	1	1	5	5	1	3	3	1	1	1	53
17040105	1	2	2	2	5	1	1	3	3	3	1	5	1	1	1	5	5	1	3	1	3	1	1	52
17040201	1	3	3	3	3	1	1	1	3	2	1	5	1	1	2	5	5	1	3	5	1	1	1	53
17040202	1	2	2	2	3	1	1	3	3	3	1	5	1	1	1	5	5	1	3	3	3	1	1	52
17040203	1	2	1	3	3	1	1	3	3	2	1	5	1	1	1	5	5	1	3	3	1	1	1	49
17040204	1	3	1	5	3	1	1	3	3	2	1	5	1	1	1	5	5	1	3	3	1	1	1	52
17040205	1	3	3	3	3	3	1	3	3	3	1	5	1	1	1	5	5	1	3	3	1	1	1	55
17040206	2	3	1	2	3	5	1	1	3	2	1	5	1	1	2	5	5	1	3	5	1	1	1	55
17040207	1	2	2	2	3	3	1	3	3	2	1	5	1	1	1	5	5	1	3	5	1	1	1	53

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
17040208	3	3	1	2	3	5	1	3	3	3	1	5	1	1	1	5	5	1	3	5	1	1	1	58
17040209	2	2	1	3	3	3	1	1	3	2	1	5	1	1	1	5	5	1	3	5	1	1	1	52
17040210	1	2	2	2	3	1	1	1	3	2	1	5	1	1	1	5	5	1	3	5	1	1	1	49
17040211	1	2	1	3	3	1	1	1	3	2	1	5	1	1	1	5	5	1	3	5	1	3	1	51
17040212	1	3	1	3	3	1	1	3	3	2	1	5	1	1	1	5	5	1	3	3	1	1	1	50
17040213	1	3	1	3	3	1	1	3	3	2	1	5	1	1	1	5	5	1	3	3	1	3	1	52
17040214	1	1	1	3	3	1	1	1	2	2	1	5	1	1	2	5	5	1	3	5	1	1	1	48
17040215	1	2	1	3	3	1	1	3	2	2	1	5	1	1	2	5	5	1	3	5	1	1	1	51
17040216	1	1	1	2	3	1	1	3	2	2	1	5	1	1	1	5	5	1	3	5	3	1	1	50
17040217	1	1	1	1	3	1	1	3	2	2	1	5	1	1	1	5	5	1	3	5	3	1	1	49
17040218	1	1	1	2	3	1	1	3	2	2	1	5	1	1	1	5	5	1	3	5	3	1	1	50
17040219	1	2	1	4	3	1	1	1	2	2	1	5	1	1	1	5	5	1	3	5	1	1	1	49
17040220	1	1	1	4	3	1	1	3	2	2	1	5	1	1	1	5	5	1	3	3	1	1	1	48
17040221	1	2	1	4	3	1	1	3	2	2	1	5	1	1	1	5	5	1	3	5	1	1	1	51
17050101	1	3	1	4	3	5	1	3	3	2	1	5	1	1	1	5	3	3	3	5	1	1	1	57
17050102	1	1	1	3	3	3	1	3	3	2	1	5	1	1	1	5	3	3	3	3	1	3	1	52
17050103	1	3	1	4	3	5	1	3	3	2	1	5	1	1	1	5	3	3	3	5	1	3	1	59
17050104	1	1	1	3	3	1	1	3	3	2	1	5	1	1	1	5	3	3	3	3	3	3	1	52

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
17050105	1	1	1	3	3	1	1	1	3	2	1	5	1	1	1	5	3	3	3	5	3	3	3	54
17050106	1	1	1	3	3	1	1	1	3	2	1	5	1	1	1	5	3	3	3	3	3	3	3	52
17050107	1	1	1	3	3	1	2	3	3	2	1	5	1	1	1	5	3	3	3	5	5	3	1	57
17050108	1	1	1	3	3	3	1	1	3	2	1	5	1	1	1	5	3	3	3	5	3	3	1	54
17050109	1	1	1	3	3	1	2	1	3	2	1	5	1	1	1	5	3	3	3	3	5	3	1	53
17050110	1	1	1	3	3	3	2	1	3	2	1	5	1	1	1	5	3	3	3	3	1	3	1	51
17050111	1	2	1	5	3	3	1	1	2	2	1	5	1	1	1	5	3	3	3	3	3	1	1	52
17050112	1	3	1	5	3	5	1	1	2	2	1	5	1	1	1	5	3	3	3	5	1	1	1	55
17050113	1	2	1	4	3	3	1	1	2	2	1	5	1	1	1	5	3	3	3	5	1	1	1	51
17050114	3	4	2	5	3	5	1	1	3	2	1	5	1	1	2	5	3	3	3	5	1	1	1	61
17050115	1	3	1	3	3	5	1	3	3	2	1	5	1	1	1	5	3	3	3	5	1	3	1	58
17050116	1	1	1	2	3	1	2	1	2	2	1	5	1	1	1	5	3	3	3	3	3	3	1	49
17050117	1	1	1	3	3	3	2	3	3	2	1	5	1	1	1	5	3	3	3	3	1	3	1	53
17050118	1	1	1	3	3	3	2	3	3	2	1	5	1	1	1	5	3	3	3	3	1	3	1	53
17050119	1	1	1	3	3	3	2	3	3	2	1	5	1	1	1	5	3	3	3	3	1	3	1	53
17050120	1	1	1	5	3	3	1	3	2	2	1	5	1	1	1	5	3	3	3	3	3	1	1	53
17050121	1	1	1	4	3	1	1	3	2	2	1	5	1	1	1	5	3	3	3	3	3	1	1	50
17050122	1	3	1	4	3	5	1	1	2	2	1	5	1	1	1	5	3	3	3	5	1	1	1	54
17050123	1	1	1	2	3	3	1	3	2	2	1	5	1	1	1	5	3	3	3	3	3	1	1	50
17050124	1	1	1	2	3	1	1	3	2	2	1	5	1	1	1	5	3	3	3	3	1	1	1	46
17050201	1	1	1	2	3	3	1	5	2	2	1	5	1	1	1	5	3	3	3	5	1	3	1	54

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
17050202	1	1	1	2	3	1	2	1	2	2	1	5	1	1	1	5	3	3	3	3	1	3	1	47
17050203	2	2	1	2	3	1	2	3	2	2	1	5	1	1	1	5	3	3	3	3	1	3	1	51
17060101	1	1	1	2	3	1	1	1	2	2	1	5	1	1	1	1	1	1	1	3	5	3	1	40
17060102	1	1	1	1	3	1	2	3	2	2	1	5	1	1	1	1	1	1	1	3	3	3	1	40
17060103	1	3	1	2	3	1	2	3	2	2	1	5	1	1	1	1	1	1	1	5	5	3	3	49
17060104	3	3	1	1	3	1	2	3	2	2	1	5	1	1	1	1	1	1	1	3	1	3	1	42
17060105	1	1	1	1	3	1	2	3	2	2	1	5	1	1	1	1	1	1	1	3	1	3	1	38
17060106	1	2	1	1	3	1	2	3	2	2	1	5	1	1	1	1	1	1	1	3	3	3	3	43
17060107	1	2	2	2	3	3	2	3	3	2	1	5	1	1	1	1	1	1	1	5	3	3	3	50
17060108	1	3	1	2	3	5	2	1	2	2	1	5	1	1	1	1	1	1	1	5	1	3	3	47
17060109	2	3	2	2	3	5	2	1	3	2	1	5	1	1	1	1	1	1	1	5	1	3	3	50
17060110	3	3	2	3	3	5	2	3	3	2	1	5	1	1	1	1	1	1	1	5	1	3	3	54
17060201	1	1	1	2	3	1	1	3	2	2	1	5	1	1	1	1	1	1	1	5	5	1	1	42
17060202	1	1	1	2	3	1	1	1	2	2	1	5	1	1	1	1	1	1	1	5	3	1	1	38
17060203	1	1	1	2	3	1	1	3	2	2	1	5	1	1	1	1	1	1	1	5	3	1	1	40
17060204	1	1	1	2	3	1	1	3	2	2	1	5	1	1	1	1	1	1	1	5	1	1	1	38
17060205	1	1	1	2	3	1	1	1	2	2	1	5	1	1	1	1	1	1	1	3	5	1	1	38
17060207	1	1	1	2	3	1	1	3	2	2	1	5	1	1	1	1	1	1	1	3	5	1	1	40

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
17060208	1	1	1	2	3	1	1	3	2	2	1	5	1	1	1	1	1	1	1	3	5	1	1	40
17060209	1	1	1	2	3	1	1	1	2	2	1	5	1	1	1	1	1	1	1	3	5	1	1	38
17060210	1	1	1	2	3	1	1	1	2	2	1	5	1	1	1	1	1	1	1	3	5	1	1	38
17060301	1	1	1	2	3	1	1	3	2	2	1	5	1	1	1	1	1	1	1	3	5	1	1	40
17060302	1	1	1	2	3	3	1	3	2	2	1	5	1	1	1	1	1	1	1	3	3	1	1	40
17060303	1	1	1	2	3	5	1	1	2	2	1	5	1	1	1	1	1	1	1	3	1	1	1	38
17060304	1	1	1	2	3	1	1	1	2	2	1	5	1	1	1	1	1	1	1	3	5	1	1	38
17060305	1	1	1	2	3	1	1	3	2	2	1	5	1	1	1	1	1	1	1	3	5	1	1	40
17060306	1	3	1	2	3	1	1	3	2	2	1	5	1	1	1	1	1	1	1	3	3	1	1	40
17060307	1	1	1	1	3	3	1	3	1	1	1	5	1	1	1	1	1	1	1	3	1	1	1	35
17060308	2	1	1	1	3	1	1	3	1	1	1	5	1	1	1	1	1	1	1	3	3	1	1	36
17070101	1	3	2	3	3	5	2	1	3	2	1	5	1	1	1	3	1	1	3	3	1	3	3	52
17070102	3	3	2	2	3	3	2	1	2	2	1	5	1	1	1	3	1	1	3	3	1	3	3	50
17070103	1	3	2	3	3	3	2	3	2	2	1	5	1	1	1	3	1	1	3	3	1	3	1	49
17070104	1	1	2	4	3	3	2	3	3	2	1	5	1	1	1	3	1	1	3	3	1	3	1	49
17070105	1	3	1	3	3	5	2	5	4	3	1	5	1	1	1	3	1	1	3	3	1	3	3	57
17070106	2	3	1	3	3	5	2	1	3	3	1	5	1	1	1	3	1	1	3	3	1	3	3	53
17070201	1	1	1	1	3	1	2	3	2	2	1	5	1	1	1	3	1	1	3	3	3	3	1	44
17070202	1	2	1	2	3	1	2	3	2	2	1	5	1	1	1	3	1	1	3	3	1	3	1	44
17070203	1	1	1	1	3	1	2	3	2	2	1	5	1	1	1	3	1	1	3	3	3	3	1	44
17070204	1	1	1	2	3	1	2	3	3	2	1	5	1	1	1	3	1	1	3	3	1	3	1	44

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
17070301	3	3	2	5	3	5	2	3	4	3	1	5	1	1	1	3	1	1	3	3	3	3	1	60
17070302	3	3	2	3	3	5	2	3	4	3	1	5	1	1	1	3	1	1	3	3	3	3	1	58
17070303	1	3	2	4	3	1	2	1	2	2	1	5	1	1	1	3	1	1	3	3	5	3	1	50
17070304	1	2	2	4	3	1	2	3	2	2	1	5	1	1	1	3	1	1	3	3	5	3	1	51
17070305	1	3	2	5	3	1	2	1	3	2	1	5	1	1	1	3	1	1	3	3	5	3	1	52
17070306	3	3	1	3	3	5	2	3	3	3	1	5	1	1	1	3	1	1	3	3	1	3	1	54
17070307	1	2	1	3	3	1	2	3	3	2	1	5	1	1	1	3	1	1	3	3	3	3	1	48
17080001	1	4	2	3	3	5	2	5	4	4	1	5	1	1	1	1	1	3	1	3	1	3	3	58
17080002	1	3	1	3	3	5	2	3	4	4	1	5	1	1	1	1	1	3	1	3	1	3	3	54
17080003	1	3	1	3	3	5	2	3	4	3	2	5	1	1	1	1	1	3	1	3	1	3	3	54
17080004	1	3	1	3	3	5	2	1	4	5	1	5	1	1	1	1	1	3	1	3	3	3	3	55
17080005	1	3	2	3	3	3	2	3	4	4	1	5	1	1	1	1	1	3	1	3	1	3	3	53
17080006	1	3	1	2	3	3	2	3	3	2	2	5	1	1	1	1	1	3	1	3	3	3	3	51
17090001	3	3	2	3	3	5	2	3	4	4	1	5	1	1	1	1	1	5	1	3	1	3	1	57
17090002	3	3	2	3	3	5	2	3	4	4	1	5	1	1	1	1	1	5	1	3	1	3	1	57
17090003	3	3	1	3	3	5	2	5	4	2	1	5	1	1	1	1	1	5	1	3	1	3	1	56
17090004	3	3	2	3	3	5	2	5	4	4	1	5	1	1	1	1	1	5	1	3	1	3	1	59
17090005	3	3	1	3	3	3	2	3	4	4	1	5	1	1	1	1	1	5	1	3	1	3	1	54

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
17090006	3	3	1	3	3	3	2	3	4	4	1	5	1	1	1	1	1	5	1	3	1	3	1	54
17090007	3	3	1	3	3	3	2	3	4	2	1	5	1	1	1	1	1	5	1	3	1	3	1	52
17090008	3	3	1	3	3	5	2	3	4	2	1	5	1	1	1	1	1	5	1	3	1	3	1	54
17090009	3	3	2	3	3	3	2	3	4	3	1	5	1	1	1	1	1	5	1	3	1	3	1	54
17090010	1	4	1	5	3	5	2	3	4	2	1	5	1	1	1	1	1	5	1	3	1	3	1	55
17090011	3	3	2	3	3	5	2	3	4	4	1	5	1	1	1	1	1	5	1	3	1	3	1	57
17090012	1	4	2	3	3	5	2	3	4	2	1	5	1	1	1	1	1	5	1	5	1	3	1	56
17100101	1	3	2	3	3	1	2	3	3	2	1	5	1	1	1	1	1	3	1	3	5	3	3	52
17100102	1	3	2	3	3	3	2	3	3	2	1	5	1	1	1	1	1	3	1	3	3	3	3	52
17100103	1	3	1	3	3	5	2	3	4	2	2	5	1	1	1	1	1	3	1	3	1	3	3	53
17100104	1	3	2	2	3	5	2	3	3	2	1	5	1	1	1	1	1	3	1	3	1	3	3	51
17100105	1	3	1	2	3	1	2	3	3	2	1	5	1	1	1	1	1	3	1	5	3	3	3	50
17100106	1	3	1	2	3	3	2	1	3	2	2	5	1	1	1	1	1	3	1	3	1	3	3	47
17100201	1	3	1	2	3	3	2	1	3	2	2	5	1	1	2	1	1	3	1	3	3	3	1	48
17100202	1	3	2	3	3	5	2	3	3	2	1	5	1	1	2	1	1	3	1	3	1	3	1	51
17100203	1	3	1	3	3	5	2	5	3	2	1	5	1	1	1	1	1	3	1	3	3	3	1	53
17100204	3	3	1	2	3	3	2	5	3	2	1	5	1	1	1	1	1	3	1	3	3	3	1	52
17100205	2	3	1	2	3	5	2	5	3	2	1	5	1	1	1	1	1	3	1	3	1	3	1	51
17100206	3	3	2	3	3	5	2	3	3	2	1	5	1	1	1	1	1	3	1	3	1	3	1	52
17100207	3	3	2	3	3	5	2	3	3	2	1	5	1	1	1	1	1	3	1	3	3	3	1	54
17100301	1	3	2	2	3	5	2	3	4	5	1	5	1	1	1	1	1	3	1	3	1	3	1	53

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
17100302	1	3	2	2	3	5	2	5	4	5	1	5	1	1	1	1	1	3	1	3	1	3	1	55
17100303	1	3	2	2	3	5	2	5	4	3	1	5	1	1	1	1	1	3	1	3	1	3	1	53
17100304	1	3	2	2	3	3	2	5	3	2	1	5	1	1	1	1	1	3	1	3	1	3	1	49
17100305	1	3	2	1	3	1	2	5	3	2	1	5	1	1	1	1	1	3	1	3	1	3	1	46
17100306	1	3	2	2	3	1	2	3	3	2	1	5	1	1	1	1	1	3	1	3	3	3	1	47
17100307	3	3	2	3	3	5	2	3	4	5	1	5	1	1	1	1	1	3	1	3	1	3	1	56
17100308	3	3	2	3	3	5	2	5	4	5	1	5	1	1	1	1	1	3	1	3	1	3	1	58
17100309	3	3	2	3	3	5	2	5	4	5	1	5	1	1	1	1	1	3	1	3	1	3	3	60
17100310	3	3	2	3	3	5	2	5	4	5	1	5	1	1	1	1	1	3	1	3	1	3	1	58
17100311	3	3	1	3	3	3	2	5	4	5	1	5	1	1	1	1	1	3	1	3	1	3	3	57
17100312	1	3	2	2	3	1	2	5	5	5	1	5	1	1	1	1	1	3	1	3	3	3	1	54
17110001	1	3	1	3	3	5	2	3	3	1	1	5	1	1	1	1	1	5	1	3	1	3	3	52
17110002	1	3	1	3	3	5	2	3	3	2	1	5	1	1	1	1	1	5	1	3	1	3	3	53
17110003	1	3	1	2	3	3	2	3	4	2	2	5	1	2	1	1	1	5	1	3	3	3	3	55
17110004	1	3	1	3	3	5	2	3	3	1	1	5	1	1	1	1	1	5	1	3	1	3	3	52
17110005	1	3	2	3	3	5	2	3	3	1	1	5	1	1	1	1	1	5	1	3	3	3	3	55
17110006	1	3	2	3	3	5	2	3	3	1	1	5	1	1	1	1	1	5	1	3	3	3	3	55
17110007	1	3	2	3	3	5	2	3	3	1	1	5	1	1	1	1	1	5	1	3	1	3	3	53

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
17110008	1	3	2	3	3	5	2	3	3	1	1	5	1	1	1	1	1	5	1	3	1	3	3	53
17110009	1	4	2	3	3	5	2	1	3	1	1	5	1	1	1	1	1	5	1	3	1	3	3	52
17110010	1	4	2	3	3	5	2	3	3	2	1	5	1	1	1	1	1	5	1	3	1	3	3	55
17110011	1	4	2	3	3	5	2	3	3	2	1	5	1	1	1	1	1	5	1	3	1	3	3	55
17110012	1	4	2	3	3	5	2	3	3	2	1	5	1	1	1	1	1	5	1	3	1	3	3	55
17110013	1	4	2	3	3	3	2	3	3	3	1	5	1	1	1	1	1	5	1	3	1	3	3	54
17110014	1	4	3	3	3	3	2	1	4	4	1	5	1	1	1	1	1	5	1	1	1	3	3	53
17110015	1	4	2	3	3	3	2	3	4	3	1	5	1	1	1	1	1	5	1	3	1	3	3	55
17110016	1	4	1	3	3	3	2	3	4	3	2	5	1	1	1	1	1	5	1	3	1	3	3	55
17110017	1	3	1	3	3	3	2	3	3	2	2	5	1	1	1	1	1	5	1	3	3	3	3	54
17110018	1	3	1	3	3	3	2	3	4	2	1	5	1	1	1	1	1	5	1	3	1	3	3	52
17110019	1	4	1	3	3	5	2	1	4	2	2	5	1	1	1	1	1	5	1	5	1	3	3	56
17110020	1	3	1	3	3	3	2	1	3	2	1	5	1	1	1	1	1	5	1	3	3	3	3	51
17110021	1	3	1	3	3	1	2	3	3	2	1	5	1	1	1	1	1	5	1	3	5	3	3	53
17120001	1	1	2	2	3	1	2	3	2	2	1	5	1	1	1	3	3	1	5	3	5	3	1	52
17120002	1	1	1	1	3	1	2	3	2	2	1	5	1	1	1	3	3	1	5	3	5	3	1	50
17120003	1	1	2	2	3	1	2	1	3	2	1	5	1	1	1	3	3	1	5	3	5	3	1	51
17120004	1	1	2	2	3	1	2	3	2	2	1	5	1	1	1	3	3	1	5	3	5	3	1	52
17120005	3	1	2	2	3	1	2	3	3	2	1	5	1	1	1	3	3	1	5	3	5	3	1	55
17120006	3	1	2	2	3	1	2	3	3	3	1	5	1	1	1	3	3	1	5	3	5	3	1	56
17120007	3	1	2	2	3	5	2	5	3	2	1	5	1	1	1	3	3	1	5	3	5	3	3	63

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
17120008	2	2	2	2	3	5	2	3	3	2	1	5	1	1	1	3	3	1	5	3	5	3	3	61
17120009	1	1	1	2	3	1	2	3	3	2	1	5	1	1	1	3	3	1	5	3	5	3	1	52
18010101	1	3	1	1	3	1	3	5	5	5	1	5	3	1	2	1	1	3	1	1	3	3	5	58
18010102	1	3	2	2	3	3	3	5	5	5	1	5	3	1	1	1	1	3	1	1	3	3	5	61
18010103	1	3	3	3	3	1	3	3	5	5	1	5	3	1	1	1	1	3	1	3	3	3	5	61
18010104	1	3	3	2	3	3	3	3	5	5	1	5	3	1	1	1	1	3	1	3	3	3	5	62
18010105	1	3	2	2	3	3	3	5	5	5	1	5	3	1	1	1	1	3	1	5	3	3	5	65
18010106	1	3	2	2	3	1	3	3	5	5	1	5	3	1	1	1	1	3	1	3	5	3	5	61
18010107	1	3	1	2	3	1	3	3	5	5	1	5	3	1	1	1	1	3	1	3	5	3	5	60
18010108	1	3	2	2	3	3	3	5	5	5	1	5	3	1	1	1	1	3	1	3	5	3	5	65
18010109	3	3	2	3	3	5	3	3	5	5	1	5	3	1	1	1	1	3	1	5	3	3	5	68
18010110	3	3	2	3	3	5	3	5	5	5	1	5	3	1	1	1	1	3	1	3	3	3	5	68
18010111	3	4	2	3	3	3	3	3	5	5	1	5	3	1	2	1	1	3	1	3	3	3	5	66
18010201	3	2	2	2	3	3	2	3	4	3	1	5	1	1	1	1	1	3	1	3	3	3	1	52
18010202	3	2	2	2	3	1	2	3	4	3	1	5	1	1	1	1	1	3	1	3	3	3	1	50
18010203	3	2	2	3	3	5	2	3	4	4	1	5	1	1	1	1	1	3	1	3	3	3	1	56
18010204	2	2	2	2	3	3	2	5	4	3	1	5	2	1	1	1	1	3	1	3	3	3	5	58
18010205	1	2	2	2	3	3	3	3	4	4	1	5	3	1	1	1	1	3	1	3	1	3	5	56

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
18010206	2	3	2	2	3	5	2	5	4	5	1	5	2	1	1	1	1	3	1	3	1	3	5	61
18010207	1	2	2	2	3	3	3	3	4	5	1	5	3	1	1	1	1	3	1	3	1	3	5	57
18010208	1	2	2	2	3	3	3	3	4	5	1	5	3	1	1	1	1	3	1	5	1	3	5	59
18010209	1	3	2	2	3	3	3	5	5	5	1	5	3	1	1	1	1	3	1	3	3	3	5	63
18010210	1	2	2	2	3	3	3	3	4	5	1	5	3	1	1	1	1	3	1	3	3	3	5	59
18010211	1	2	2	2	3	5	3	5	4	5	1	5	3	1	1	1	1	3	1	3	1	3	5	61
18010212	1	2	2	2	3	5	3	5	5	5	1	5	3	1	1	1	1	3	1	3	3	3	5	64
18020001	3	1	2	1	3	3	2	3	4	3	1	5	2	1	1	3	5	5	3	5	5	3	3	67
18020002	1	1	1	2	3	3	3	3	4	3	1	5	3	1	1	3	5	5	3	3	3	3	5	65
18020003	1	3	2	3	3	5	3	5	4	4	1	5	3	1	1	3	5	5	3	3	1	3	5	72
18020004	1	3	2	2	3	5	3	3	4	5	1	5	3	1	1	3	5	5	3	3	1	3	5	70
18020005	1	3	3	2	3	5	3	5	4	5	1	5	3	1	1	3	5	5	3	3	1	3	5	73
18020101	1	3	3	3	3	5	3	3	5	5	1	5	3	1	1	3	5	5	3	5	1	3	5	75
18020102	1	3	3	3	3	5	3	1	5	5	1	5	3	1	1	3	5	5	3	5	1	3	5	73
18020103	1	3	2	3	3	5	3	5	5	5	1	5	3	1	1	3	5	5	3	3	1	3	5	74
18020104	2	3	2	3	3	5	3	5	5	5	1	5	3	1	1	3	5	5	3	3	1	3	5	75
18020105	2	3	3	3	3	5	3	5	5	5	1	5	3	1	2	3	5	5	3	3	1	3	5	77
18020106	3	3	3	3	3	3	3	3	5	5	1	5	3	1	1	3	5	5	3	1	1	3	5	71
18020107	2	3	3	2	3	3	3	3	5	5	2	5	3	1	1	3	5	5	3	3	3	3	5	74
18020108	3	3	3	3	3	3	3	3	5	5	1	5	3	1	1	3	5	5	3	3	1	3	5	73
18020109	4	4	3	3	3	3	3	5	5	5	1	5	3	1	1	3	5	5	3	3	1	3	5	77

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
18020110	4	3	4	3	3	3	3	1	5	5	1	5	3	1	1	3	5	5	3	5	1	3	5	75
18020111	4	4	4	4	3	5	3	5	5	5	1	5	3	1	1	3	5	5	3	5	1	3	5	83
18020112	1	3	3	3	3	5	3	3	4	5	1	5	3	1	1	3	5	5	3	3	1	3	5	72
18020113	1	3	3	3	3	5	3	3	5	5	1	5	3	1	1	3	5	5	3	5	1	3	5	75
18020114	1	3	2	3	3	3	3	3	5	5	1	5	3	1	1	3	5	5	3	3	1	3	5	70
18020115	1	3	2	3	3	3	3	3	5	5	1	5	3	1	1	3	5	5	3	3	1	3	5	70
18020116	1	3	4	3	3	3	3	5	5	5	1	5	3	1	1	3	5	5	3	5	1	3	5	76
18020117	3	3	3	3	3	3	3	3	5	5	1	5	3	1	1	3	5	5	3	5	1	3	5	75
18020118	1	3	3	3	3	5	3	5	5	5	1	5	3	1	1	3	5	5	3	5	1	3	5	77
18020119	1	3	2	3	3	5	3	5	5	5	1	5	3	1	1	3	5	5	3	3	1	3	5	74
18020120	2	3	3	3	3	5	3	1	5	5	1	5	3	1	2	3	5	5	3	3	3	3	5	75
18020121	1	3	2	2	3	5	3	3	4	5	1	5	3	1	1	3	5	5	3	3	3	3	5	72
18020122	1	2	2	2	3	3	3	3	4	5	1	5	3	1	1	3	5	5	3	5	3	3	5	71
18020123	1	3	2	2	3	3	3	3	4	5	1	5	3	1	1	3	5	5	3	3	1	3	5	68
18020124	2	3	3	2	3	3	3	3	5	5	1	5	3	1	2	3	5	5	3	3	3	3	5	74
18020125	1	3	2	2	3	5	3	3	4	5	1	5	3	1	1	3	5	5	3	3	1	3	5	70
18020126	2	3	3	3	3	5	3	3	5	5	1	5	3	1	1	3	5	5	3	5	1	3	5	76
18020127	4	3	4	5	3	3	3	1	5	5	1	5	3	1	1	3	5	5	3	3	1	3	5	75

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
18020128	4	3	4	5	3	5	3	3	4	5	1	5	3	1	1	3	5	5	3	3	1	3	5	78
18020129	4	3	3	3	3	5	3	3	4	5	1	5	3	1	1	3	5	5	3	3	1	3	5	75
18030001	4	3	3	3	3	5	3	3	4	5	1	5	3	1	1	5	5	5	5	3	3	3	5	81
18030002	4	3	3	3	3	5	3	3	4	5	1	5	3	1	1	5	5	5	5	5	3	3	5	83
18030003	4	3	3	3	3	5	3	3	5	5	1	5	3	1	1	5	5	5	5	3	1	3	5	80
18030004	4	3	3	3	3	5	3	3	5	5	1	5	3	1	1	5	5	5	5	5	3	3	5	84
18030005	4	3	3	3	3	3	3	1	5	5	1	5	3	1	1	5	5	5	5	3	3	3	5	78
18030006	4	3	3	3	3	5	3	3	5	5	1	5	3	1	1	5	5	5	5	5	5	3	5	86
18030007	4	3	3	3	3	5	3	3	5	5	1	5	3	1	1	5	5	5	5	5	5	3	5	86
18030008	4	3	2	3	3	3	3	1	5	5	1	5	3	1	1	5	5	5	5	3	5	3	5	79
18030009	4	3	2	3	3	3	3	3	5	5	1	5	3	1	1	5	5	5	5	3	5	3	5	81
18030010	4	3	2	3	3	3	3	3	4	5	1	5	3	1	1	5	5	5	5	5	5	3	5	82
18030011	4	3	2	3	3	3	3	3	5	5	1	5	3	1	1	5	5	5	5	5	1	3	5	79
18030012	4	3	3	3	3	5	3	5	5	5	1	5	3	1	1	5	5	5	5	5	1	3	5	84
18040001	4	3	3	3	3	3	3	5	5	5	1	5	3	1	2	5	5	5	3	5	1	3	5	81
18040002	4	4	4	3	3	3	3	5	5	5	1	5	3	1	1	5	5	5	3	5	1	3	5	82
18040003	4	4	3	3	3	3	3	5	5	5	1	5	3	1	2	5	5	5	3	5	1	3	5	82
18040004	4	4	4	4	3	3	3	3	5	5	1	5	3	1	1	5	5	5	3	3	1	3	5	79
18040005	4	4	4	3	3	5	3	5	5	5	1	5	3	1	1	5	5	5	3	5	1	3	5	84
18040006	4	3	2	3	3	3	3	5	4	5	1	5	3	1	1	5	5	5	3	3	5	3	5	80
18040007	3	3	2	3	3	3	3	3	5	5	1	5	3	1	1	5	5	5	3	3	3	3	5	76

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
18040008	2	3	2	3	3	3	3	3	4	5	1	5	3	1	1	5	5	5	3	5	3	3	5	76
18040009	1	3	3	3	3	3	3	5	4	5	1	5	3	1	1	5	5	5	3	3	3	3	5	76
18040010	1	3	3	3	3	3	3	3	4	5	1	5	3	1	1	5	5	5	3	3	3	3	5	74
18040011	1	3	2	3	3	3	3	3	5	5	1	5	3	1	1	5	5	5	3	5	3	3	5	76
18040012	1	3	2	3	3	5	3	3	4	5	1	5	3	1	1	5	5	5	3	3	3	3	5	75
18040013	4	3	3	3	3	5	3	3	5	5	1	5	3	1	1	5	5	5	3	3	1	3	5	78
18040014	4	3	3	4	3	3	3	5	5	5	1	5	3	1	1	5	5	5	3	3	1	3	5	79
18050001	3	4	1	3	3	3	3	5	5	5	1	5	3	1	1	5	5	5	3	5	1	3	5	78
18050002	3	4	1	3	3	3	3	5	5	5	1	5	3	1	1	5	5	5	3	4	1	3	5	77
18050003	3	4	1	2	3	3	3	5	5	5	1	5	3	1	2	5	5	5	3	5	1	3	5	78
18050004	3	4	1	2	3	3	3	5	5	5	1	5	3	1	1	5	5	5	3	2	1	3	5	74
18050005	3	4	1	2	3	5	3	5	5	5	2	5	3	2	1	5	5	5	3	5	1	3	5	81
18050006	3	5	1	2	3	3	3	3	5	5	1	5	3	2	1	5	5	5	3	3	1	3	5	75
18060001	1	4	1	2	3	3	3	5	5	5	2	5	3	2	2	3	5	5	5	3	1	3	5	76
18060002	2	4	2	4	3	5	3	5	5	5	1	5	3	1	1	3	5	5	5	5	1	3	5	81
18060003	1	3	2	3	3	3	3	3	5	5	1	5	3	1	1	3	5	5	5	3	1	3	5	72
18060004	1	3	3	3	3	3	3	1	5	5	1	5	3	1	1	3	5	5	5	3	1	3	5	71
18060005	1	3	3	3	3	5	3	5	5	5	1	5	3	1	1	3	5	5	5	5	1	3	5	79

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
18060006	1	3	2	3	3	5	3	5	5	5	1	5	3	1	1	3	5	5	5	3	3	3	5	78
18060007	3	3	2	3	3	3	3	3	5	5	1	5	3	1	1	3	5	5	5	5	1	3	5	76
18060008	4	3	2	2	3	5	3	5	5	5	1	5	3	1	1	3	5	5	5	5	3	3	5	82
18060009	4	3	2	2	3	3	3	5	5	5	1	5	3	1	1	3	5	5	5	3	5	3	5	80
18060010	4	3	2	2	3	5	3	5	5	5	1	5	3	1	1	3	5	5	5	3	3	3	5	80
18060011	1	3	3	3	3	3	3	5	5	5	1	5	3	1	1	3	5	5	5	3	3	3	5	77
18060012	1	3	3	3	3	5	3	3	5	5	1	5	3	1	1	3	5	5	5	5	3	3	5	79
18060013	4	3	2	2	3	5	3	3	5	5	1	5	3	1	1	3	5	5	5	5	3	3	5	80
18060014	3	3	1	2	3	5	3	3	5	5	1	5	3	1	1	5	5	5	5	3	5	3	5	80
18070101	4	4	3	3	3	3	3	3	5	5	1	5	3	1	1	5	5	5	5	5	3	3	5	83
18070102	5	4	3	3	3	5	3	5	5	5	1	5	3	1	1	5	5	5	5	3	1	3	5	84
18070103	4	4	3	3	3	3	3	3	5	5	1	5	3	1	1	5	5	5	5	5	1	3	5	81
18070104	5	5	3	3	3	5	3	3	5	5	1	5	3	1	1	5	5	5	5	5	1	3	5	85
18070105	5	5	3	2	3	5	3	3	5	5	1	5	3	1	1	5	5	5	5	3	1	3	5	82
18070106	5	5	3	3	3	5	3	3	5	5	1	5	3	1	2	5	5	5	5	3	1	3	5	84
18070107	4	4	1	2	3	5	3	1	5	5	1	5	3	1	1	5	5	5	5	3	3	3	5	78
18070201	5	5	1	3	3	3	3	3	5	5	2	5	3	1	4	5	5	5	5	3	1	3	5	83
18070202	5	4	4	5	3	5	3	3	5	5	1	5	3	1	1	5	5	5	5	4	1	3	5	86
18070203	5	4	4	3	3	5	3	5	5	5	1	5	3	1	1	5	5	5	5	3	1	3	5	85
18070204	5	5	2	3	3	3	3	3	5	5	2	5	3	2	4	5	5	5	5	5	1	3	5	87
18070301	4	5	3	3	3	3	3	5	5	5	1	5	3	1	3	5	5	5	5	1	1	3	5	82

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
18070302	5	4	4	4	3	3	3	5	5	5	1	5	3	1	1	5	5	5	5	3	1	3	5	84
18070303	4	4	3	3	3	5	3	5	5	5	1	5	3	1	1	5	5	5	5	3	1	3	5	83
18070304	4	4	3	3	3	5	3	5	5	5	1	5	3	1	1	5	5	5	5	4	1	3	5	84
18070305	4	4	2	3	3	5	3	5	5	5	1	5	3	1	1	5	5	5	5	1	1	3	5	80
18080001	2	3	1	2	3	5	2	1	3	2	1	5	2	1	1	3	3	3	3	3	5	3	5	62
18080002	1	2	1	3	3	5	3	3	3	3	1	5	3	1	1	3	3	3	3	3	5	3	5	66
18080003	2	3	1	3	3	5	2	3	3	3	1	5	3	1	1	3	3	3	3	3	1	3	5	63
18090101	3	1	1	3	3	3	3	3	3	4	1	5	3	1	1	5	5	3	5	5	5	3	5	74
18090102	3	1	2	3	3	3	3	5	3	4	1	5	3	1	1	5	5	3	5	3	5	3	5	75
18090103	4	1	3	1	3	5	3	3	3	5	1	5	3	1	1	5	5	3	5	5	5	3	5	78
18090201	4	1	3	1	3	3	3	3	3	4	1	5	3	1	1	5	5	3	5	3	5	3	5	73
18090202	2	1	1	5	3	5	2	5	3	4	1	5	2	1	1	5	5	3	5	3	3	3	5	73
18090203	4	3	3	2	3	5	3	1	4	4	1	5	3	1	1	5	5	3	5	5	1	3	5	75
18090204	4	3	3	2	3	5	3	3	4	4	1	5	3	1	1	5	5	3	5	3	3	3	5	77
18090205	4	3	3	3	3	5	3	3	4	5	1	5	3	1	1	5	5	3	5	3	3	3	5	79
18090206	4	4	3	3	3	5	3	5	4	5	1	5	3	1	1	5	5	3	5	3	1	3	5	80
18090207	5	3	4	3	3	5	3	3	4	4	1	5	3	1	1	5	5	3	5	3	1	3	5	78
18090208	5	3	4	3	3	5	3	3	4	5	1	5	3	1	1	5	5	3	5	3	1	3	5	79

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
18100100	5	3	4	3	3	5	3	3	3	4	1	5	3	1	1	1	5	3	5	3	1	3	5	73
18100200	4	3	2	3	3	5	3	5	5	4	1	5	3	1	1	1	5	3	5	5	1	3	5	76
19010101	1	1	1	1	5	1	1	3	3	3	1	4	1	1	1	3	3	3	3	3	5	1	1	50
19010102	1	2	1	1	5	1	1	3	3	3	1	4	1	1	1	3	3	3	3	3	5	1	1	51
19010103	1	1	1	1	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19010201	1	1	1	1	5	1	1	3	3	3	1	4	1	1	1	3	3	3	3	3	5	1	1	50
19010202	1	1	1	1	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19010203	1	1	1	1	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19010204	1	1	1	1	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19010301	3	2	1	2	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	55
19010302	1	3	1	1	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	53
19010303	1	1	1	1	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19010401	1	3	1	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19010402	1	3	1	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19020101	1	1	2	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	50
19020102	1	1	2	2	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19020103	1	3	1	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19020104	1	1	1	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	49
19020201	1	1	1	1	5	5	1	3	3	1	1	5	1	1	1	3	3	3	3	3	3	1	1	51
19020202	1	1	1	3	5	5	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	55
19020301	1	1	1	3	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
19020302	1	1	1	3	5	5	1	3	3	1	1	5	1	1	1	3	3	3	3	3	3	1	1	53
19020401	3	3	1	2	5	5	1	3	3	1	1	5	1	1	1	3	3	3	3	3	1	1	1	54
19020402	2	3	2	5	5	5	1	3	3	1	1	5	1	1	1	3	3	3	3	3	1	1	1	57
19020501	1	3	2	5	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	1	1	1	52
19020502	1	3	2	5	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	1	1	1	52
19020503	1	1	2	5	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	1	1	1	50
19020504	1	3	2	5	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	3	1	1	54
19020505	1	1	1	5	5	3	1	3	3	1	1	5	1	1	1	3	3	3	3	3	1	1	1	51
19020601	1	1	1	3	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19020602	1	1	1	2	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	52
19020701	1	1	1	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	49
19020702	1	1	1	1	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19030101	1	1	1	2	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	52
19030102	1	1	4	1	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	54
19030103	1	1	1	1	5	1	1	3	1	2	1	5	1	1	1	3	3	3	3	3	5	1	1	48
19030201	1	1	1	1	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19030202	1	1	1	1	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19030203	1	1	1	1	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	51

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
19030204	1	1	1	1	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19030205	1	1	1	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	49
19030206	1	1	1	1	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19030301	1	1	1	3	5	1	1	3	3	1	1	4	1	1	1	3	3	3	3	3	5	1	1	50
19030302	1	1	1	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	49
19030303	1	1	1	3	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19030304	1	1	1	3	5	1	1	3	3	1	1	4	1	1	1	3	3	3	3	3	5	1	1	50
19030305	1	1	1	3	5	1	1	3	3	1	1	3	1	1	1	3	3	3	3	3	5	1	1	49
19030401	1	3	2	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	52
19030402	1	3	3	2	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	54
19030403	1	1	3	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19030404	1	1	2	3	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	52
19030405	1	1	2	2	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19030501	1	1	2	3	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	52
19030502	1	1	2	3	5	1	1	3	3	1	1	4	1	1	1	3	3	3	3	3	5	1	1	51
19030503	1	1	1	3	5	1	1	3	1	2	1	1	1	1	1	3	3	3	3	3	5	1	1	46
19040101	1	1	1	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	49
19040102	1	1	1	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	49
19040103	1	1	1	1	5	1	1	3	3	1	1	4	1	1	1	3	3	3	3	3	5	1	1	48
19040104	1	1	1	1	5	1	1	3	3	1	1	4	1	1	1	3	3	3	3	3	5	1	1	48
19040201	1	1	2	1	5	1	1	3	3	1	1	4	1	1	1	3	3	3	3	3	5	1	1	49

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
19040202	1	1	2	1	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	52
19040203	1	1	2	1	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	52
19040204	1	1	3	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19040205	1	1	3	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19040301	1	1	2	1	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	52
19040302	1	1	1	1	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19040303	1	1	3	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19040304	1	1	3	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19040401	1	1	1	1	5	1	1	3	3	1	1	4	1	1	1	3	3	3	3	3	5	1	1	48
19040402	1	1	3	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19040403	1	1	3	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19040404	1	1	3	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19040501	1	1	1	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	49
19040502	1	1	1	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	49
19040503	1	1	1	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	49
19040504	1	3	1	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19040505	4	2	3	2	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	56
19040506	4	2	3	2	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	56
19040507	3	3	1	2	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	54
19040508	1	3	1	2	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	52
19040509	3	1	3	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	53

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
19040510	1	3	1	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19040511	1	1	3	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19040601	1	1	2	1	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	52
19040602	1	1	3	1	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	53
19040603	1	1	3	1	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	53
19040604	1	1	3	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19040605	1	1	3	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19040606	1	1	3	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19040607	1	1	3	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19040608	1	1	3	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19040609	1	1	3	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19040701	1	1	3	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19040702	1	1	3	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19040703	1	1	3	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19040704	1	1	3	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19040705	1	1	3	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19040801	1	1	3	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19040802	1	1	3	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19040803	1	1	3	1	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19040804	1	1	2	3	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	52
19040805	1	1	1	3	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
19050101	1	1	1	2	5	1	1	3	1	2	1	1	1	1	1	3	3	3	3	3	5	1	1	45
19050102	1	1	1	2	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	50
19050103	1	1	1	2	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	50
19050104	1	1	1	2	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	50
19050105	1	1	1	2	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	50
19050201	1	1	1	2	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	50
19050202	1	1	1	3	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19050203	1	1	1	3	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	51
19050301	1	1	1	2	5	1	1	3	3	1	1	5	1	1	1	3	3	3	3	3	5	1	1	50
19050302	1	1	2	3	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	54
19050303	1	1	2	3	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	54
19050304	1	1	1	3	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	53
19050401	1	1	1	3	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	53
19050402	1	1	1	3	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	53
19050403	1	1	1	3	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	53
19050404	1	1	1	3	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	53
19050405	1	1	1	2	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	52
19060101	1	1	1	2	5	1	1	3	3	3	1	4	1	1	1	3	3	3	3	3	5	1	1	51
19060102	1	1	1	2	5	1	1	3	3	3	1	4	1	1	1	3	3	3	3	3	5	1	1	51
19060103	1	1	1	2	5	1	1	3	3	3	1	4	1	1	1	3	3	3	3	3	5	1	1	51
19060201	1	1	1	2	5	1	1	3	3	3	1	3	1	1	1	3	3	3	3	3	5	1	1	50

HUCode	AS1	UD1	UD2	UD3	UD5	UD7	TE1	TE2	TE3	TE4	LS1	LS2	LS3	LS4	LS5	WS1	WS2	WS3	WS4	WS5	TR2	TR3	TR4	Total
19060202	1	1	1	2	5	1	1	3	3	3	1	1	1	1	1	3	3	3	3	3	5	1	1	48
19060203	1	1	1	2	5	1	1	3	3	3	1	3	1	1	1	3	3	3	3	3	5	1	1	50
19060204	1	1	1	2	5	1	1	3	3	3	1	3	1	1	1	3	3	3	3	3	5	1	1	50
19060205	1	1	1	2	5	1	1	3	3	3	1	1	1	1	1	3	3	3	3	3	5	1	1	48
19060301	1	1	1	2	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	52
19060302	1	1	1	2	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	52
19060303	1	1	1	2	5	1	1	3	3	3	1	4	1	1	1	3	3	3	3	3	5	1	1	51
19060304	1	1	1	2	5	1	1	3	3	3	1	4	1	1	1	3	3	3	3	3	5	1	1	51
19060401	1	1	1	2	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	52
19060402	1	1	1	2	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	52
19060403	1	1	1	2	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	52
19060501	1	1	1	2	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	52
19060502	1	1	1	2	5	1	1	3	3	3	1	5	1	1	1	3	3	3	3	3	5	1	1	52
19060503	1	1	1	2	5	1	1	3	3	3	1	3	1	1	1	3	3	3	3	3	5	1	1	50
20010000	1	3	1	2	3	1	5	3	5	5	1	5	2	1	1	3	3	3	3	3	5	3	5	67
20020000	1	3	1	2	3	1	5	3	5	5	1	5	2	1	1	3	3	3	3	3	5	3	5	67
20040000	1	3	1	2	3	1	5	3	5	5	1	5	2	1	1	3	3	3	3	3	5	3	5	67
20050000	1	3	1	2	3	1	5	3	5	5	1	5	2	1	1	3	3	3	3	3	3	3	5	65
20060000	1	3	1	1	3	5	5	3	5	5	1	5	2	1	1	3	3	3	3	3	1	3	5	66
20070000	1	2	1	2	3	1	5	3	5	5	1	4	2	1	1	3	3	3	3	3	5	3	5	65
20080000	1	2	1	1	3	1	5	3	5	5	1	3	2	1	1	3	3	3	3	3	5	3	5	63

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. REPORT DATE (DD-MM-YYYY)	2. REPORT TYPE	3. DATES COVERED (From - To)
09-2005	Final	

4. TITLE AND SUBTITLE
Watershed Application of the Sustainable Installations Regional Resource Assessment Tool

5a. CONTRACT NUMBER

5b. GRANT NUMBER

5c. PROGRAM ELEMENT NUMBER

6. AUTHOR(S)
Elisabeth M. Jenicek, Donald F. Fournier, Natalie R. Downs, and Brad Boesdorfer

5d. PROJECT NUMBER
Reimbursable Order No.

5e. TASK NUMBER
T233FF

5f. WORK UNIT NUMBER
L74711

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
U.S. Army Engineer Research and Development Center (ERDC)
Construction Engineering Research Laboratory (CERL)
PO Box 9005
Champaign, IL 61826-9005

8. PERFORMING ORGANIZATION REPORT NUMBER
ERDC/CERL TR-05-24

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)
Office of the Chief of Engineers
Headquarters, U.S. Army Corps of Engineers (HQUSACE)
441 G St., NW.
Washington, DC 20314-1000

10. SPONSOR/MONITOR'S ACRONYM(S)

11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION / AVAILABILITY STATEMENT
Approved for public release; distribution is unlimited.

13. SUPPLEMENTARY NOTES
Copies are available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.

14. ABSTRACT

The U.S. Army Corps of Engineers recognizes the need for a system-wide approach to ecosystem management in its efforts to provide environmental sustainability in the stewardship of the Nation's water resources. As the Corps' increased activities in sustainable watershed and water resources management will require expanded use of new and existing tools. The system-wide modeling, assessment, and restoration technologies program is designed to build and deliver these tools for effective system-wide applications. One major product of this program will be a Web-based decision support framework that will allow access to information, databases, numerical models, index models, habitat models, and socio-economic models. Characterization of the Nation's watersheds using an existing approach that has been applied to military installations will lever-age existing research for a new application. This work characterized the nation's watersheds using a sub-set of indicators from Sustainable Installations Regional Resource Assessment (SIRRA), and developed a methodology to identify watersheds with potential sustainment problems, and to rank the watersheds by their relative vulnerability to such problems.

15. SUBJECT TERMS

SIRRA	water conservation	software
sustainable facilities	watershed management	

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			Elisabeth M. Jenicek
Unclassified	Unclassified	Unclassified	SAR	192	19b. TELEPHONE NUMBER (include area code) (217) 373-7238