
United States™ Census 2010

High Risk Improvement Plan



USCENSUSBUREAU

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I. Introduction

The most prominent data collection effort mounted by the Census Bureau is the constitutionally mandated decennial census of the nation's population and housing. Challenges facing planners of the 2010 Census are formidable. Demographic and technological changes occur at a rapid pace. The Census Bureau recognizes that the amount, degree, and complexity of external change continue to challenge how the Census Bureau prioritizes and responds. A growing challenge is how, in a short timeframe, the Census Bureau can implement mass enumeration techniques, while ensuring that those who are more difficult to enumerate are included.

The typical Census takes roughly 10 years of planning, development, and testing, followed by 2 years of execution, and 3 years of data dissemination. As of October 2008, we are completing the testing for early operations, continuing the testing for other operations and systems, and completing the development for several operations and systems that have been de-scoped from our Field Data Collection Automation (FDCA) contract. Of the 12,558 lines in the 2010 Census schedule, 2,173 (17.3%) have been completed as of November 1, 2008. (Please note that the percent of schedule completed understates the percent of work completed for the entire program because our 2010 Census schedule only encompasses the actual 2010 Census activities—not research, development, and testing activities in previous years.)

In March 2008, the Government Accountability Office (GAO) designated the 2010 Census as high risk. They said “GAO’s work and Census have highlighted a number of long-standing and emerging challenges facing the 2010 Census. Because the decennial census is one of the foundations for many government decisions, threats to a timely and reliable decennial census can affect the public’s confidence in government.” The GAO recommended that the Bureau “(1) strengthen its systems testing and risk management activities, (2) define specific measurable performance requirements for the handheld mobile computing device, and (3) develop an integrated and comprehensive plan to control its costs and manage operations.” The GAO also recommended that the Bureau improve the overall FDCA effort.

In response to the GAO recommendations and other assessments, the Census Bureau developed a comprehensive recovery plan. This document describes the process of “getting to done” as four key actions: (1) Develop an integrated and comprehensive plan to control costs and manage operations, (2) Strengthen risk management activities, (3) Strengthen systems testing, and (4) Improve management of the field data collection automation effort.

Strengthening cost control and operational management will focus on improving communications, on improving schedule management, and on improving budget management. As one example, we point to the “Executive [Schedule] Alert Report” produced weekly since July 23, 2008 that focuses on the 45 key activities on the critical path to a successful Census. The report itself is briefed to the Census Bureau Director weekly, and to the OMB monthly. Please also see Appendix 1 for a high-level list and graphical overview of key activities for 2008 through 2011.

Strengthening risk management activities has largely been completed. In the past several months, we have identified 23 program-level risks, linked all project-level (operational) risks to these

program-level risks, and have begun to document formal risk mitigation strategies and contingency plans for all 23 risks (the strategies for the 14 “red” risks will be completed by November 14, 2008). Appendix 2 includes two documents: (1) Our current risk register for the entire 2010 Census program, (2) a high-level risk summary for the program.

To improve the key decennial census systems and to improve the contractor-supplied systems, we naturally focus more on the near-term key operations than the later ones (see Appendix 1). Consequently we are devoting major attention to the first two (2009) operations -- Address Canvassing (AC) and Group Quarters Validation (GQV) -- both of which are needed to update the Master Address File (MAF) and the TIGER spatial database. MAF/TIGER is the foundation of the Census -- it creates the universe for all other operations that collect information from the public.

Our short-term focus then is to complete testing the hand-held computers for AC and the operational control system to be used for AC and GQV, paying attention not only to quantity of tests but also their quality – “Is the system ready to go to the field?” As we complete the testing phase of each operation, it moves to deployment and then operations (for example, the deploy date for the AC operation is February 3, 2009 and the operation starts April 5, 2009).

The principle behind the development of the 2010 Census has been to test thoroughly and make only minimal changes after that, culminating in an end-to-end test of all aspects of the Decennial Census in a 2008 Dress Rehearsal (DR). Unfortunately, due to a funding delay and immature systems, we had to curtail DR testing. To fill that gap, we are (1) conducting a piecewise but comprehensive end-to-end systems test, and (2) developing and testing operations de-scoped from the FDCA contractor. By “piecewise end-to-end” testing, we mean testing every system or operation in isolation (or in limited sequences) and also testing all the interfaces upstream and downstream. When we complete these systems and field tests, we will be confident about saying “All operations for the 2010 Census are ready.”

Overall, there are three key metrics of successful implementation for the 2010 Census:

- The first will be the mail response rate in April 2010—if we meet or exceed our estimated rate of 64%, we will be confident of completing a successful census. A significantly lower rate will require additional resources if we are to complete the census on time.
- The second metric will be delivery of apportionment counts by December 31, 2010, as required by Title 13, U.S.Code. In addition to meeting the deadline, these counts need to be accurate, with minimal differential undercount or overcount of any population group, i.e., count every U.S. resident once, and only once, in the right place.
- The final metric will be delivery of accurate redistricting data products to the States by April 1, 2011, as required by P.L. 94-171. This is the final legal deadline of the decennial census.

This is a living document and will continue to change and improve as the Census Bureau makes progress in strengthening decennial census program and performance management.

1.1 Highlights of Progress-To-Date

The Census Bureau began implementing its decennial census “recovery plan” in April/May 2008, focusing on six areas:

1. Launching replan operations for paper Non-Response Follow-up
2. Reducing risk in the Field Data Collection Automation (FDCA) contract
3. Improving program management
4. Improving schedule management
5. Developing a program-testing plan
6. Improving internal and external communications

Documents describing each of these six areas have been provided to the Department of Commerce, the Office of Management and Budget (OMB), the Department of Commerce Office of the Inspector General, GAO, and the Congress.

To support the six areas in the recovery plan, the Census Bureau has taken a number of specific steps, including:

1. Key staffing changes and Program Management Office (PMO) improvements
2. Closer scrutiny of the FDCA contract and replan efforts
3. Improved technical assessments including embedding staff with the contractor, Harris Corp.
4. Working more closely with OMB, GAO and other stakeholders to improve oversight and performance management.

1. Goal and Action Roadmap for Addressing the GAO Recommendations

The goal of this high-risk improvement plan is to address the four specific GAO recommendations as part of the overall recovery plan in order to strengthen management and oversight and reduce risks for the 2010 Census. To achieve this, the Census Bureau is taking the following actions:

Developing an integrated and comprehensive plan to control costs and manage operations
 Strengthening risk management activities
 Strengthening systems testing
 Improving management of the field data collection automation effort

2.1 Methodology for Evaluation:

The Department of Commerce's Economics and Statistics Administration will continue to work closely with the Census Bureau to monitor progress in achieving the actions in this plan. The Associate Director for the Decennial Census meets weekly with the Decennial Management Division Leadership team to review, measure, evaluate and report progress to the Census Bureau Director. The Director, in turn, provides this information to the Deputy Secretary, Department of Commerce, and Under Secretary for Economic Affairs, Economics and Statistics Administration.

Beginning in September, a combined DOC and Bureau Executive Management Team, consisting of the Deputy Secretary, Under Secretary for Economic Affairs, Deputy General Counsel, CIO, CFO, Senior Procurement Executive, Census Bureau Director, Deputy Director, and Associate Director for Decennial Census, will convene monthly to monitor progress and address issues and risks. Finally, independent groups, including Mitre and Erimax, will be engaged on selected deliverables, work products and program progress assessments.

2. Action 1: Develop an integrated and comprehensive plan to control costs and manage operations

Desired outcome: The Census Bureau will improve its management practices, communication management, schedule management, and budget management.

Lead organization:

- Associate Director for the Decennial Census (Management Practices)
- Chief, Decennial Management Division, and Associate Director for Communications (Communication Management)
- Chief, Decennial Management Division (Schedule Management)
- Chief, Decennial Management Division, and Chief, Budget Division (Budget Management)

2.1. Accomplishments

Management Practices

The Census Bureau has instituted a new management approach that strengthens planning and oversight relative to risk management, issue identification, product testing, communications, and budget/cost management. The formal management processes are documented in the 2010 Census *Project Management Plan*, which was issued May 8, 2008. Having and using this plan ensures program coordination and establishes clear lines of authority and mechanisms that enable leadership to focus on problems as they arise. This plan fully documents a number of processes, including the process for managing requirements changes.

Along with developing this plan, the Census Bureau has increased the intensity and pace of senior management involvement, including daily status assessments and problem resolution sessions chaired by the Associate Director for the Decennial Census, weekly status assessment meetings with the Director and Deputy Director, and periodic reviews by the MITRE

Corporation and other expert consultants. The Deputy Secretary, Under Secretary for Economic Affairs, and Deputy Under Secretary for Economic Affairs, are briefed regularly.

The Census Bureau has installed new management at both the executive and program levels who are focused on reducing risk. Arnold Jackson was named acting Associate Director for Decennial Census Programs in early March 2008, and this assignment became permanent on July 9, 2008.

Patricia McGuire was named as the new program manager for the FDCA Project Management Office in late May 2008.

The Census Bureau has invited and supported additional external evaluations including increasing the scope of the MITRE Corporation's role, using experts in program management and relying on subject matter experts.

Finally, the Census Bureau will begin producing a monthly "Program Management Review" report for the entire 2010 Census by October 31, 2008. This will be an overview including a dashboard and metrics on budget, schedule, testing, and risk, with discussion on risk impact and mitigation planning. While not intended for the general public, it will be proactively shared with the Department of Commerce, OMB and GAO.

Communication Management

In February 2008 the Census Bureau identified and implemented an external communications team to centralize, strengthen, and streamline interactions with external stakeholders, including the Department of Commerce, the Department of Commerce Office of the Inspector General, GAO, OMB and Congress. This team ensures accurate and consistent information exchange and has been working on key components of the external communications plan. Additionally, the Census Bureau has identified single Points of Contact for each oversight entity (Feb 2008 for GAO and Congress; June 2008 for OIG) and has begun addressing process improvements for increasing responsiveness.

In May 2008, the Census Bureau improved internal communications through clarifying decennial census roles and responsibilities, simplifying and streamlining the governance process (particularly in the Field Data Collection Automation Program Management Office), and through analyzing internal and external stakeholders in order to develop communications plans and strategies.

The Census Bureau created a small internal communications team to simplify and better integrate the information flow throughout the Census Bureau. One key to improving internal communications is the establishment of an internal Census Operations Center web site which will be fully operational by October 31, 2008. The web site will have information accessible about program status, as well as password-protected areas for issue management and information sharing for those with a need-to-know on a pre-decisional basis.

Schedule Management

The Census Bureau has developed an integrated project schedule for the 2010 Census using Primavera software that is successfully used in other Census operations. This schedule was completed on May 22, 2008 and currently contains over 11,000 individual project activities and 47 critical path milestones. Along with the schedule, the Census Bureau has documented and started using the 2010 Census Project Schedule Management Process. This process includes weekly progress updates that are followed by weekly analysis of the schedule. While this activity is ongoing, the Census Bureau is conducting more detailed analysis and validation of the 47 milestones that appear in the schedule.

Budget Management

In January 2008, the Census Bureau finalized the Interface Control Document (ICD) between the Decennial Budget Integration Tool (DBIT) and the Commerce Business System (CBS) for accessing financial management data. The DBIT enhances access to budget data and increases the Census Bureau's ability to effectively and efficiently model, formulate, execute, and report on the Decennial Census budget. DBIT replaces manual, and very labor intensive, legacy tools and processes. (CBS is the Department of Commerce's administrative accounting system and is the budget and accounting system of record.) In April 2008, the Census Bureau began using the budget execution reports generated from DBIT system for tracking actual versus planned costs.

In June 2008 the Census Bureau completed the development of detailed costs and is preparing assumptions matrices for each 2010 Census operation, which the Census Bureau expects to complete by October. The assumptions matrix is an extremely useful way to demonstrate to oversight and other stakeholders how the costs are derived for each operation. During the 2010 Census, operations, field costs and progress will be tracked daily with a dedicated "Cost and Progress" system, which was tested successfully during recent Dress Rehearsal activities.

2.2. Milestones

Management Changes

- October 31, 2008 - Intranet website (Census Operations Center) to track progress via dashboard summaries on the Decennial program preparation, testing, and operations
- October 2008 - Continue monthly program-level program management reviews with Census Bureau leadership, but enhance the effectiveness of these reviews by transitioning to use of the Census Operations Center

Communication Management

- October 18, 2008 – Complete the final external stakeholder communication plan (although implementation of some components already is underway)

Schedule Management

- October to December 2008 – Complete analysis and close any gaps to ensure validated base-lined schedule logic; continue to monitor status weekly.

Budget Management

- August to October 2008 – Complete preparing assumptions matrix for each operation, which can be used to demonstrate to oversight and other stakeholders how the costs are derived for each operation.
- August 2008 to February 2009 - Prepare DBIT with 2010 budget data to reflect the President's FY 2010 budget request to the Congress.
- September to December 2008 – Begin design phase for creation of data gathering templates that allows for collection and monitoring of data requests from program managers across both formulation and execution activities
- September to December 2008 – Begin phasing in direct access to program managers to selected DBIT-generated formulation and financial management reports

2.3. Metrics

Management Changes

- Program-level PMRs completed each month, attended by senior management from the Census Integration Group and the Decennial Leadership Group.

Communication Management

- Regional Directors participate in coordination with Field Division headquarters in working group meetings for various program areas (e.g., communications working group).

Schedule Management

- Percent of schedule milestones started on schedule (reported monthly)
- Percent of schedule milestones completed on schedule (reported monthly)
- Trend analysis of the number of schedule issues related to the milestone activities that are opened, closed, and remain open (reported monthly)
- Percent of completed activities that finished on-time stays the same or increases month to month
- Percent of activities that have started but are running late decreases month to month
- Percent of activities that have not started but are running late decreases month to month
- Trend analyses of (1) the number and percent of activities that finished on-time, (2) the number and percent of activities in-progress that are running late, and (3) the number and percent of activities not started that are running late (reported monthly)
- All 47 critical path milestones for the 44 major census operations are on schedule or a remediation plan is in place

Budget Management

- Variance of actual vs. planned spending by framework is within 10%, tracked monthly
- Track actual vs. planned budget-related assumptions to indicate operations which could potentially exceed their budget allocation or operations which could generate cost savings that could be reallocated
- Earned value metrics for the Field Data Collection Automation contract, the Decennial Response Integration System contract, and the Data Access and Dissemination System II contract are within a 10% variance, and recovery plans instituted if appropriate. EVM will be tracked against approved budget.

3. Action 2: Strengthen risk management activities

Desired outcome: Fully mature risk management process is followed at the program-level, including ongoing and frequent reviews of program and project-level risks. Risk management for the 2010 Decennial Census program is focused on the identification, analysis, and mitigation of potential risks to the success of the program, using the RiskNav risk management software tool. The process is characterized by six primary functions: Identify Risks, Analyze Risks, Plan Mitigation, Mitigate Risks, Assess Effectiveness, and Reassess Exposure. The risk management process for the 2010 Decennial Census Program is iterative and designed to be performed continuously throughout the development and implementation of the 2010 Decennial Census. At this level of definition, the risk management process at both the program and the operational (or project) levels is identical. The specific procedures are different at the program and project-levels, however. These differences are described in the procedures sections of the 2010 Census Risk Management Plan (RMP). The RMP is intended to inform decennial census staff and contractors how risks are identified, managed, and tracked for the 2010 Decennial Census Program. The RMP may be used by internal and external stakeholders as a reference and guide regarding the roles, responsibilities, and processes that govern risk management for the 2010 Decennial Census.

Lead organization: Decennial Management Division, Assistant Division Chief for Planning and Coordination

3.1. Accomplishments

- June 6, 2008 – Completed the Risk Management Plan
- June 2008 - Began monthly briefings of significant risks with senior Census executives
- July 25, 2008 - Completed review of potential program-level mitigation and contingency strategies
- July 25, 2008 - Completed the linking of project-level risks to program-level risks
- July 28, 2008 - Began developing mitigation and contingency plans targeted to high risk areas. Development of contingency plans will be prioritized based on the level of risk and the timing of the affected operations. For example, development of a contingency plan for Address Canvassing is the top priority.

3.2. Milestones

- August 15-December 19, 2008 -- Key Census staff develop Address Canvassing contingency plan
- October 1 - October 31, 2008 - Risk managers present mitigation plans for review to the Census Integration Group
- October 15, 2008 - Begin weekly risk review board meetings to track progress and recommend refinements as needed for implementing risk mitigation and contingency plans
- November 14, 2008 - Mitigation plans are approved

3.3. Metrics

- Risk review board meets as planned
- New risks are identified regularly
- Risks are closed regularly
- Probability and/or severity of risk is decreasing
- Mitigation and contingency plans are updated monthly
- Contingency plans are implemented
- Number of risks identified by external reviews that do not have mitigation plans or contingency plans in place decreases (reported monthly)
- Trend analysis of the number of risks where the severity level has declined due to the implementation of the mitigation plans. (reported monthly)

4. Action 3: Strengthen Systems Testing

Desired outcome: Fully understood scope of testing for the 2010 Census, including the documentation of testing plans, leading to system tests which validate the core data flows that makeup the 2010 system landscape. The 2010 Census activities involve connecting and interfacing a number of separate IT systems, which include data transfers and interfaces across these systems. As data flows across systems they are transformed, manipulated, and processed. The system testing will be closely monitored and thoroughly evaluated.

Lead organization: Decennial Systems Processing Office and Decennial Statistical Studies Division

4.1. Accomplishments

- June 6, 2008 – Completed a 2010 Census catalog of decennial testing activities
- June 6, 2008 – Completed the 2010 Census Address Canvassing Testing Plan
- June 24, 2008 – Completed the 2010 Census Systems and Applications Testing and Operational Integration Plan
- July 31, 2008 – Presented testing gap analysis to identify where additional or new tests needed to be conducted to the Decennial Testing Steering Group
- July 31, 2008 to August 11, 2008 – Team leaders reviewed the testing gap analysis
- August 13, 2008 – Presented testing gap analysis to the Census Integration Group

- August 29, 2008 and September 4, 2008 - Presented testing gap analysis to the Associate Director for Decennial Census Programs
- August 29, 2008 – Produced a draft Address Canvassing Testing gap analysis
- September 3, 2008 – Produced a final draft of the 2010 Census Address Canvassing Large Block Test Plan
- September 3, 2008 – Produced a working draft of the 2010 Census Address Canvassing Operational Field Test Plan
- Ongoing - Systems for all pre-census operations were fully tested as part of the Dress Rehearsal, and Headquarters Processing, Geography, and DRIS program areas have continued all relevant collection and data capture processing and data interfaces through the enumeration and tabulation stages of the decennial census using Dress Rehearsal data

Milestones

- Ongoing – Continue testing gap analysis. [Such analysis will not be final until all testing has been finalized and completed.]
- December 4 - 12, 2008 (planned) – Conduct Address Canvassing Operational Field Test
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- January 2009 – Test interface between DRIS and DADS with transfer of Dress Rehearsal micro data. Test DADS tabulation systems by producing a prototype redistricting data set.
- February 2009 (planned) – Complete report on results of Address Canvassing Operational Field Test
- TBD – Determine scheduling opportunities for an operational field test of the 2010 Non-response Follow-up/Vacant Delete Check
- TBD – A general test plan document will be prepared (2010 Census External Interface Test Plan for De-Scoped Dress Rehearsal Data Collection Operations) as well as test plans for each of the threads. The threads are:
 - Address Canvassing
 - Group Quarters Enumeration
 - Nonresponse Followup/Vacant Delete Check
 - Field Verification

Once the FDCA de-scoping and potential realignment of resources and system provisioning is completed, the Census Bureau will begin detailed test planning and schedule formation. Once defined, test plans (and milestones) will be produced for system testing. The Census Bureau recognizes that cuts in the Dress Rehearsal operations and re-scoping of contractor work requires the Census Bureau to plan and execute additional test activities prior to fielding operations for the 2010 Census in production. Therefore, testing for four major threads will be expanded beyond the Dress Rehearsal processing in the upcoming months. All contributing system providers and operations staff have been consulted concerning the efficacy of the strategy's formulation and implementation.

5.3 Metrics

TBD--Preliminary metrics definition for testing that was presented to the Associate Director for Decennial Census Programs in September 12, 2008. The first set of metrics for testing activities will be developed from the Master Activity Schedule. These metrics will focus on scheduled start and finish dates, comparing planned to actual. A second set of metrics will be produced that focus on quality of testing. These quality testing metrics are currently being defined.

5. Action 4: Improve management of the field data collection automation effort

Desired Outcome: Implement improved oversight and program management processes for field data collection automation in the areas of measurement and analysis, verification and validation, quality control and assurance, risk management, cost and schedule management, requirements management, and change control.

Lead organization: Chief, Field Data Collection Automation Program Management Office (FDCA PMO)

5.1. Accomplishments

- March 2008 – The Census Bureau provided final negotiated requirements for performance standards for the handheld computers.
- April 2008 – The FDCA PMO developed and implemented a plan to get more insight into Harris development and testing efforts. This “Insight Plan” included embedding PMO and stakeholder staff in both of the contractor’s sites (Melbourne FL and Largo MD). The stakeholder and PMO staff members attend peer reviews, review test scripts, observe testing, and provide technical direction via daily and weekly critical path review meetings held by Harris Corporation.
- April/May 2008 – The PMO conducted a software assessment of the Operations Control System and development practices. The PMO monitors bi-weekly code deliveries from Harris in relation to the assessment findings. Harris reports weekly to the PMO on their plans and progress related to the assessment findings.
- May 6, 2008 – The Census Bureau completed the planning of a paper Non-response Follow-up operation and provided a briefing to the Department of Commerce. A team, which included Harris representatives, then began work on the requirements.
- June 6, 2008 – The Census Bureau completed work on the final paper NRFU requirements and delivered them to Harris. The Census Bureau then conducted a briefing of the requirements to Harris.
- June 2008 – The manager of the FDCA PMO was replaced with a more seasoned project manager from the Decennial Response Integration System (DRIS) PMO.
- June 2008 – Harris began conducting assembly tests of the first of three software drops planned for Address Canvassing and the Group Quarters Validation operations. Through the embedding process, PMO staff and stakeholders have observed these tests and documented issues/findings. Assembly testing will continue through the beginning of September.
- June 6, 2008 – The Census Bureau finalized a test plan for Address Canvassing, of which FDCA testing is a part.

- June and July 2008 – Harris conducted a series of detailed design reviews with the PMO and stakeholders to go over the handheld computer, operations control system, and Local Census Office infrastructure solution for Address Canvassing and the Group Quarters Validation operation.
- July 24, 2008 – Harris conducted a demonstration of portions of handheld computer and operational control system functionality to stakeholders and oversight groups. They also conducted a more detailed demonstration for several Regional Directors.
- August 8, 2008 – Completed coding and unit testing for the Address Canvassing and Group Quarters Validation software
- August 15, 2008 – Reached agreement with Harris on the new scope for the FDCA program
- August 29, 2008 – Finalized plans for accomplishing FDCA work de-scoped from Harris, including adding additional milestones to this list
- September 3, 2008 – Produced a working draft of the 2010 Census Address Canvassing Operational Field Test Plan

5.2. Milestones

Census

- September 2008 – Complete DAPPS Regression and Interface Testing
- September 2008 – Establish TMO Help Desk Core Management Team
- September 2008 – Census establishes Software Development Plan for Paper-Based Operations
- September/October 2008 – Complete DAPPS migration to new infrastructure
- October 2008 – Go ‘live’ with DAPPS for 150 ELCOs
- October 2008 – Award Project Integration PMO Support Contract to enable integration of cost and schedule activities across multiple contracts (including Harris) by FDCA PMO.
- October 2008 – Award contract to support development of Paper-Based Operations training materials.
- October 2008 – Conduct an Integrated Baseline Review for the paper-based operations (PBO) effort, which will include the identification of the PBO milestones from November 2008 through production.
- November 2008 – Roll out Help Desk Remedy System
- November 2008 – Complete Census-led activities and testing with Harris for accreditation/authority to operate approval needed for Address Canvassing.
- November/December 2008 – Conduct a small dry run and then an operational field test for Address Canvassing.
- December 2008 – Provide accreditation/authority to operate approval for Address Canvassing.
- December 2008 – Transition from Harris Interim Help Desk to Operational Census Bureau Help Desk for 2010
- January 19, 2009 to February 3, 2009 – Census Bureau and Harris to conduct operational readiness test for Address Canvassing
- March 2009 – Complete DAPPS performance and load testing for Address Canvassing

- March 2009 – Implement DAPSS Continuity of Operations Plan for Address Canvassing and beyond.
- (TBD) – Census and Harris develop milestones for FDCA security tasks de-scoped from Harris contract.
- (TBD) – Census establishes additional milestones for Software Development support for Paper Based Operations

Harris

- August to September 2008 – Receive handheld computer shipments from the manufacturer and perform quality checks on equipment.
- September 2008 – Conduct Integrated Baseline Review for revised FDCA contract
- September to October 2008 – Complete Production Integration Testing for the three Address Canvassing and Group Quarters Validation software drops
- October to November 2008 – Complete Validated Systems Testing for the three Address Canvassing and Group Quarters Validation software drops
- December 31, 2008 – Complete deployment of Early Local Census Office and technical support infrastructure for Address Canvassing

5.3. Metrics

- Development and Testing
 - Number of Problem Tracking Resolution (PTR) reports opened, by severity and by functionality, is decreasing
 - Number of PTR reports closed, by severity and by functionality, is increasing
 - Length of time to close PTR reports by severity is decreasing
 - Variance of number of scripts reviewed by the Census Bureau and for Harris, vs. planned, is within 10%
 - Variance of number of test run vs. number of tests planned is within 10%
 - Percent passed by requirement/functionality/use case is increasing
- Embedding
 - Total number of tests observed by the PMO and stakeholder staff vs. planned
- Address Canvassing Handheld Computer Performance
 - Handheld computer transmission times are decreasing
 - Handheld computer page-to-page performance
- Early Local Census Office/ Local Census Office Deployment [after testing and acceptance of equipment completed]
 - Actual versus planned for installation at the Early Local Census Offices/ Local Census Offices is within 10%
 - Percent of infrastructure tests that meet acceptable performance standards

- Program Management
 - Actual versus planned costs for the FDCA contract and for the non-Harris re-scoped effort (monthly, cumulative, and trends)
 - Actual versus planned schedule activities for the FDCA contract (Master Integrated Program Schedule – MIPS) and for the non-Harris re-scoped effort (monthly, cumulative, and trends)
 - Variance analysis for both schedule and costs
 - Critical path analysis by main component
 - Staffing numbers, such as full-time equivalents planned and actuals for the FDCA contract and for the non-Harris re-scoped effort (monthly and trends)
 - Number of quality assurance audits planned and conducted, such as for document reviews, testing, and equipment deployment
 - IT security efforts transferred to Census (due to FDCA contract de-scoping) ensure system accreditation Authority to Operate (ATO) in place prior to production operations.

**The Following Two Pages Provide A High Level
Graphical Overview Of Key 2010 Census
Activities For 2008 – 2011**

2010 Census Lifecycle Schedule Chart

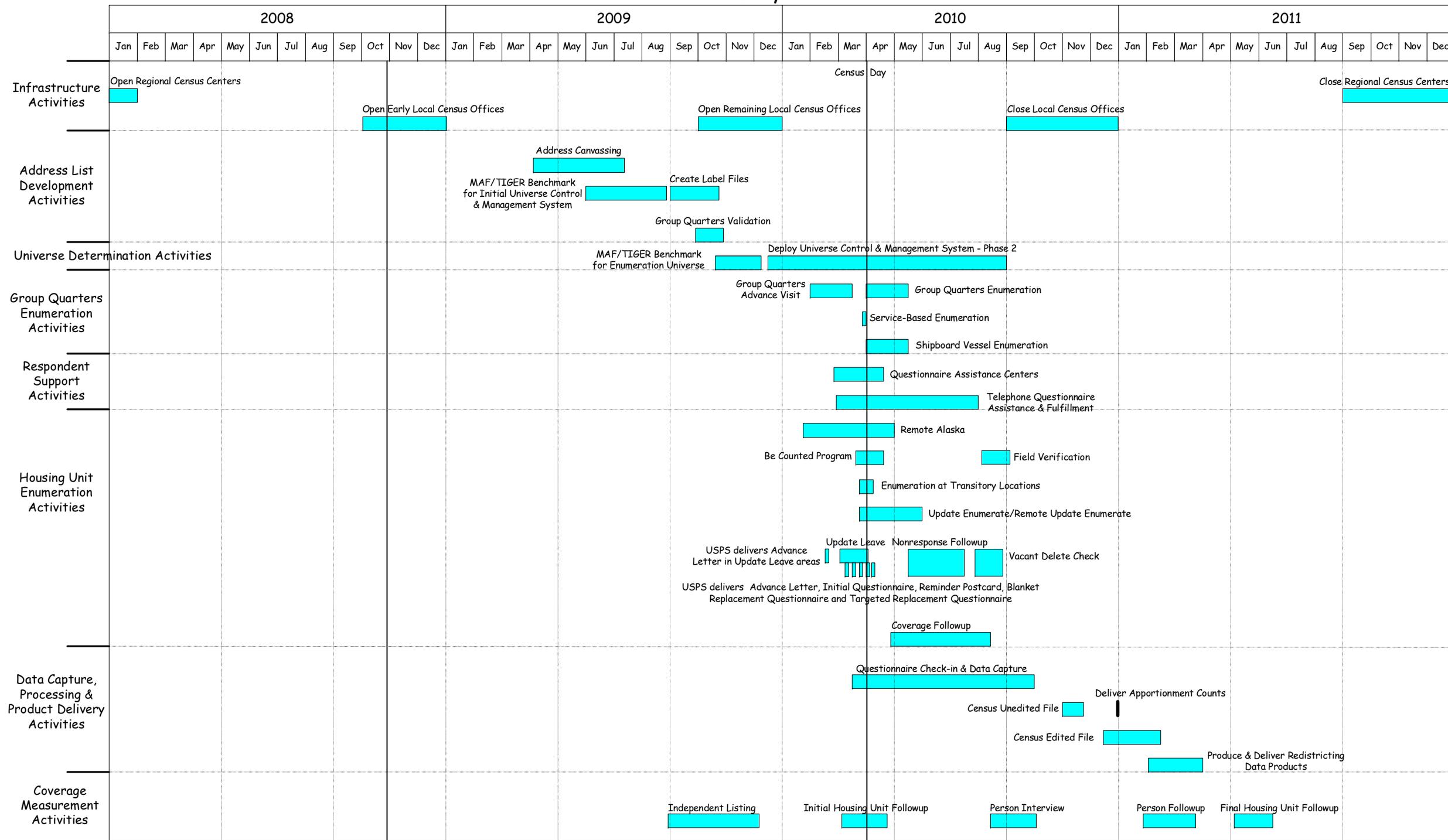
Activity			Baseline	
Group	#	Name	Start	Finish
Infrastructure	1	Census Day	4/1/10	4/1/10
	2	Open Regional Census Centers	1/1/08	1/31/08
	3	Open Early Local Census Offices	10/1/08	12/31/08
	4	Open Remaining Local Census Offices	8/31/09	12/31/09
	5	Close Local Census Centers	9/1/10	12/30/10
	6	Close Regional Census Centers	9/1/11	12/30/11
Address List Development	7	Address Canvassing	4/6/09	7/10/09
	8	MAF/TIGER Benchmark for Initial Universe Control & Management System	5/15/09	8/27/09
	9	Create Label Files	9/1/09	10/22/09
	10	Group Quarters Validation	9/28/09	10/23/09
Universe Determination	11	MAF/TIGER Benchmark for Enumeration Universe	10/19/09	12/7/09
	12	Deploy Universe Control & Management System	12/14/09	8/30/10
Group Quarters Enumeration	13	Group Quarters Advance Visit	2/1/10	3/19/10
	14	Group Quarters Enumeration	4/1/10	5/21/10
	15	Service-Based Enumeration	3/29/10	3/31/10
	16	Shipboard Vessel Enumeration	4/1/10	5/14/10
Respondent Support	17	Questionnaire Assistance Centers	2/26/10	4/19/10
	18	Telephone Questionnaire Assistance & Fulfillment	2/25/10	7/30/10
Housing Unit Enumeration	19	Remote Alaska	1/25/10	4/30/10
	20	Be Counted Program	3/19/10	4/19/10
	21	Field Verification	8/6/10	9/3/10
	22	Enumeration at Transitory Locations	3/22/10	4/9/10
	23	Update Enumerate/ Remote Update Enumerate	3/22/10	5/29/10
	24	USPS delivers Advance Letter in Update Leave areas	2/17/10	2/19/10
	25	Update Leave	3/1/10	3/31/10
	26	USPS delivers Advance Letter	3/8/10	3/10/10
	27	USPS delivers Initial Questionnaire	3/15/10	3/17/10
	28	USPS delivers Reminder Postcard	3/22/10	3/24/10
	29	USPS delivers Blanket Replacement Questionnaire	4/1/10	4/3/10
	30	USPS delivers Targeted Replacement Questionnaire	4/6/10	4/10/10
	31	Nonresponse Followup	5/1/10	7/10/10
	32	Vacant Delete Check	7/26/10	8/25/10
	33	Coverage Followup	4/26/10	8/13/10
Data Capture, Processing & Product Delivery	34	Questionnaire Check-in & Data Capture	3/14/10	9/30/10
	35	Census Unedited File	11/1/10	11/22/10
	36	Deliver Apportionment Counts	12/31/10	12/31/10
	37	Census Edited File	12/13/10	2/15/11
	38	Produce & Deliver Redistricting Data Products	2/3/11	3/30/11

2010 Census Lifecycle Schedule Chart

Activity			Baseline	
Group	#	Name	Start	Finish
Coverage Measurement	39	Independent Listing	8/28/09	12/5/09
	40	Initial Housing Unit Followup	3/4/10	4/23/10
	41	Person Interview	8/14/10	10/2/10
	42	Person Followup	1/28/11	3/19/11
	43	Final Housing Unit Followup	5/5/11	6/15/11

2010 Census Lifecycle Schedule Chart

29 October 2008



Appendix 2 includes two documents:

- 1. Our current risk register for the entire 2010 Census program.**
- 2. High-level risk summary for the program.**

2010 Census Risk Register

Risk ID	Status	Risk Name	Risk Statement (Format: Context. IF (risk event), THEN (impact))	Risk Manager	Probability Rating (L,M, or H)	Probability Explanation	Cost Impact Rating (L,M,H, or None)	Cost Impact Explanation	Schedule Impact Rating (L,M,H, or None)	Schedule Impact Explanation	Technical Impact Rating (L,M,H, or None)	Technical Impact Explanation	Oversight/ Advisory Impact Rating (L,M,H, or None)	Oversight/ Advisory Impact Explanation	DATE Risk event could occur
RSK-DLG-0001	Open	Permanent Staff Retention	Key knowledge and experience resides in senior and experienced Headquarters and National Processing Center staff. In addition, there are a number of critical positions that are vacant. IF a larger number of these positions become or remain vacant and can not be filled with knowledgeable and experienced staff THEN key knowledge will be lost and required staffing levels will not be obtained resulting in the program not being adequately planned, implemented, and monitored.	Theo Schmeeckle	M	Although a significant number of Census Bureau employees are currently eligible to retire and more will be eligible between now and 2010, to date we have not experienced a mass exodus of retirees upon their eligibility. There is a chance however, that this could change as we near the busy decennial years. Employees who quit the decennial during the peak activity periods has not been a substantial problem. On the other hand, we are currently experiencing difficulty in filling vacant positions.	L	Experienced, knowledgeable employees are most likely those with higher pay grades. If a significant number retire, their replacements will likely be lower paid employees and some contractors. In addition, the current vacant positions are funded. Overall, the cost impact will be minimal.	M	Retiring employees usually provide substantial advance notice, thus filling their anticipated vacancies with well-qualified staff can be planned in advance. Vacant positions need to be filled in order to plan, develop, and implement the census. If these positions are not filled in a timely manner, then there could be delays in the 2010 Census baseline schedule.	L	This risk is low since resolution of technical issues, both anticipated and actual, draws from experienced, knowledgeable team members.	M	Advisory and oversight stakeholders have already focused on internal Census Bureau staffing issues; their areas of interest will also target other topics such as data quality and cost.	Early Calendar Year 2009
RSK-DLG-0002	Open	Inability to Recruit Sufficient Temporary Workforce	A large and temporary workforce is required to support the field effort. IF the Bureau can not recruit the needed amount THEN there will be cost, 2010 Census baseline schedule, coverage, and quality impacts.	Annetta Smith	M	The Field Staff begins building their recruiting file as early as the first census test we perform in the intercensal years. They will continue to build the pool of qualified applicants for 2010 beginning as early as August 2008.	M	Increased recruiting efforts would happen. If necessary, Field Division will use existing field staff to take on ad hoc work to help recruiting to buildup applicant pool or may have to increase pay rates.	M	Could potentially delay operations if not enough qualified candidates are in the pool.	L	Small technical impact.	M	Increased scrutiny on our ability to fill critical field positions which could directly impact field data collection operations.	On-going
RSK-DLG-0003	Open	Uncertainty of Assumptions in Cost Model	The 2010 Census program budget requests are based on cost assumptions in the cost model and other methods. IF the cost assumptions are incorrect THEN the Census Bureau may not have the funds to do the census as planned.	Mike Perez	H	Uncertainty related to the operating assumptions, what we experience, and the Field Operations and large supporting contracts are more likely to have a variance to the budget estimate. Headquarters staff and Other Objects can be more readily controlled to stay within budget estimates.	H	While the cost impact could be significant, it can be mitigated by the size and flexibility within the overall budget. A contingency fund will be requested as part of the 2010 budget. \$300 million was returned to the Treasury after Census 2000.	H	If there is a need for additional funds and early in the cycle, there could be substantial 2010 Census baseline schedule delays.	M	Few changes are made late in the program because of added risk of failure. The biggest impact is when we have insufficient funds for an Information Technology solution. Information Technology solutions require significant lead times to address.	H	Stakeholders could call into question all our estimates, or just not be as supportive when we ask for their help.	Greatest potential for impact from Fiscal Year 2008 through Fiscal Year 2011, when the budgets are the highest. The 2010 Budget was submitted to the Department of Commerce in June 2008.
RSK-DLG-0004	Open	Continuing Resolution	Recent funding has been acquired through the continuing resolution process. IF the increased funding is delayed THEN work will be delayed, canceled, or redesigned resulting in a compressed 2010 Census baseline schedule, reduced data quality, increased costs, and delays in deliverables, and hiring (Headquarters, National Processing Center, and the Field). This would be particularly disastrous in Fiscal Year 2009 with final preparation for Address Canvassing, and in Fiscal Year 2010 with final preparations for conducting the Census.	Mike Perez	L	Recent history indicates that the probability of a continuing resolution at the start of the fiscal year is likely to occur, at least for the foreseeable future.	H	Given our budget, requests are increasing each fiscal year by substantial amounts. If we are under a continuing resolution without an anomaly the cost impacts are high.	H	The longer the continuing resolution, the bigger the impact on the 2010 Census baseline schedule.	H	If systems need to be re-designed due to budget delays or shortfalls this could have high technical impacts.	M	If a continuing resolution goes on too long, then oversight/advisory stakeholders may be impelled to intercede on our behalf.	The start of each fiscal years 2009 and 2010
RSK-DLG-0005	Open	Insufficient Funding	Sufficient funding is essential to carrying out the Census as designed. Changes from the Life Cycle Estimates are hard to get approved and funded. IF the Census Bureau gets less funding than requested THEN some work may have to be reduced resulting in lower data quality and delayed 2010 Census baseline schedule.	Mike Perez	L	The Life cycle estimates have been a good barometer of funding we will likely get. Only when our requests deviate significantly from the life cycle number, does the budget get significant cuts.	H	The cost impact of receiving significantly less funding than what is reflected in our Life Cycle Estimates is obviously High.	H	This would require significant replanning.	M	The greatest impact is on Information Technology solutions.	M	Stakeholders are usually interested in specific programs. If their program of interest is affected, then they will likely act.	Greatest potential for impact from Fiscal Year 2008 through Fiscal Year 2011
RSK-DLG-0006	Open	Security Breach	Government security breaches have occurred in the past and there is heightened sensitivity about confidentiality and security. IF there is a security breach that becomes public knowledge THEN respondents may lose confidence in the Census' ability to maintain secure data resulting in increased cost, low data quality and/or delays in 2010 Census baseline schedule.	Ronald Thompson	H	Office of Management and Budget and Department of Homeland Security require that we report (and treat) both actual and suspected breaches the same. Given the amount of data being collected, both concerning the over 3 million job applicants Personally Identifiable Information and respondent data during the decennial period the probability of a breach occurring is High. The severity of the breach may be low or medium. In addition, the probability of multiple breaches (as defined by Office of Management and Budget, and Department of Homeland Security) would be High as well.	H	It is hard to estimate the cost impact of any single breach at this point in time, however, each breach would require a review and investigation by the program area and the Census Bureau Computer Incident Response Team and depending on the severity perhaps the Office of Inspector General or local law enforcement. Cumulatively, the cost of these multiple breaches would add to a Medium and possibly a High cost impact, if they significantly reduce mail response rates and cooperation with enumerators.	L	Without a better understanding of the scale of the security breach, it is hard to accurately estimate the 2010 Census baseline schedule impact. There would possibly be some impact, however, as adjustments were made to close gaps or improve processes following a breach incident.	M	The vast majority of lost data expected to take place involve paper. These types of losses would have a Low technical impact. If the loss involved IT resources, the impact could easily move into the Medium and possibly the High level depending on how the breach occurred, and how easily re-engineering or patching is to accomplish.	H	The 2010 Census is shaping up to be one of the most monitored of recent history. This is due to a number of issues such as: an increasing pressure from Congress and the public to protect data, our recent issues with laptop security and other breaches, and finally the cost of the 2010 Census coupled with the reliance on contract support for two critical areas of the Census activity. Any breaches will increase the oversight and advisory issues and multiple breaches could result in having to add overhead staff simply to deal with responding to these groups.	Present - April 2011

2010 Census Risk Register

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RSK-DLG-0007	Open	Loss of Confidential Data	The Census involves the moving of confidential data from a large number of field offices to a small number of data capture centers. In addition, Information Technology-systems also transfer confidential data. IF there is a loss of confidential data and/or it becomes public knowledge THEN respondents may lose confidence in the Census' ability to maintain confidentiality resulting in increase costs, low data quality and/or delays in the 2010 Census baseline schedule.	Debbie Bolton	M	Questionnaires have been lost in the past, however; we have increased controls.	M	There would be medium cost impacts depending on when the data loss occurs in the Census process. Early in the program might result in low mail response rates thus increasing nonresponse followup workloads.	M	There is medium 2010 Census baseline schedule impact depending on when the data loss occurs. Early in the census might delay these or later operations.	L	The vast majority of lost data are to be expected to take place involving paper. These types of losses would have a Low technical impact. If the loss involved Information Technology resources the impact could easily move into the Medium and possibly the High level depending on the breach, how it occurred, and how easily re-engineering or patching is to accomplish.	H	Any loss of confidential data is of interest to oversight.	April 2009 - April 2011
RSK-DLG-0008	Open	Respondent Cooperation	Survey and Census response rates have continued to decline over time. In addition, unexpected events, like security/confidentiality breaches, phishing scams, etc., could also affect response. IF the mail back response rates are significantly less than expected or respondent cooperation declines THEN cost may increase and data quality may decrease.	Jim Dinwiddie	M	Assumptions related to the mail response rate estimate are conservative with respect to the level of respondent cooperation.	H	For every percentage point decrease in the expected mail response rate the cost of obtaining the enumeration in nonresponse followup is substantial.	M	If there is a decrease in the mail response rate from the expected rate then this will result in an increase in the nonresponse followup workload. This could result in a delay in completing nonresponse followup and a delay in the start and end dates for Vacant/Delete Check thus pushing the date we deliver the final data or reducing its quality.	L	There are little overall technical impacts to the census.	L	The Census Bureau would provide data on 2010 Census baseline schedule thus meeting deadlines.	March 2010- July 2010
RSK-DLG-0009	Open	Stakeholder Support	Support of key Census partners is critical to the 2010 Census's success. IF partners and stakeholders are alienated and withdraw support THEN the Census cost and coverage will be affected.	Kathleen Styles	M	We need to be prepared for this and have a 'rapid response' process in place to reach out to the disaffected partners, especially Congress.	M	If this affects mail response rate, &/or cooperation during nonresponse followup, the cost implications will be high.	M	Any significant drop in mail response will have a large impact on nonresponse followup.	L	The mitigation likely will involve communication, not technical, solutions.	H	These sorts of things are very likely to draw the attention of our oversight and advisory stakeholders.	Now through the end of nonresponse followup. Highest risk will be if these events take place near Census Day 2010
RSK-DLG-0010	Open	Immigration Policy Backlash	There is intense political debate over immigration policies. IF the immigrant population feels threatened THEN response rates and data quality may decrease, leading to a poor count and higher cost.	Kathleen Styles	M	There are several ways that the immigration debate could adversely impact the census. If this risk focuses on respondents evading nonresponse followup enumerators, we rate the probability as medium. This could also adversely affect within-household coverage.	M	On the one hand, nonresponse followup is the most expensive part of the census; on the other hand we will stop trying after 6 attempts and this will become an imputation and coverage issue.	L	Our 2010 Census baseline schedule and budget allow for 6 visits to nonresponding households. We will finish nonresponse followup even if we finish with proxy interviews.	M	We may increase our proxy rates and our imputation rates, which could adversely impact data quality.	H	Our advisory committees rate immigration backlash as a #1 concern.	April - July 2010
RSK-DLG-0011	Open	Duplicates and Misses	Duplicates and misses can cause significant under- or over-counts. IF current initiatives to reduce duplicates or misses are not effective THEN stated quality objectives will not be met.	Maryann Chapin	H	We are faced with changing requirements, a shortened development window, and the potential for limited testing in preparation for 2010 Address Canvassing. All of these factors increase the risk that some component associated with the address frame development and person coverage will fail.	M	Duplicates and misses in the address frame will have significant cost impacts as both will result in higher workloads and increased costs in operations such as Nonresponse Followup and Field Verification.	M	To the extent that duplicates and misses impact the workloads for the various 2010 Census operations, our ability to complete an operation in the defined time frame is at risk.	H	Duplicates and misses in the address frame have a long term impact on users of the Master Address File. To the extent that duplicates continue to persist on the Master Address File, developing an automated approach (without a field operation) to establish the linkage between addresses is nearly impossible.	H	Much has been said by the Census Bureau, stakeholders, and oversight groups regarding the importance of the address frame in determining the overall accuracy of the 2010 Census. There will be substantial oversight from many areas with regard to our ability to establish an accurate address frame.	November 2008 - May 2010
RSK-DLG-0012	Open	Exception Enumeration Quality	Special enumeration procedures are required to count components of the population. IF these procedures fail to adequately count these subpopulations THEN differential and overall coverage may be affected. Examples: Group Quarters Enumeration; Enumeration at Transitory Locations; team enumeration, and Blitz enumeration.	Annetta Smith	L	Many different programs are used to count components of the population. The likelihood of one program failing nationally is low. The likelihood of a program not performing as planned is more localized. Some of these special procedures have been used in past Censuses.	L	If rework is needed, it is usually needed in localized areas.	L	When the census is on-going, there is very little opportunity to make major changes to programs nationwide. If a program is in jeopardy in a local area, resources from other areas will be marshaled to get the enumeration completed.	L	During the census, there is not time to make significant changes to national programs without putting the delivery of the population counts in jeopardy.	H	There would be substantial oversight from representatives of the sub-population groups.	Any time beginning with Address Canvassing (Spring 2009) through nonresponse followup (Summer 2010)
RSK-DLG-0013	Open	Inaccurate Puerto Rico Address List	The structure of addresses in Puerto Rico is unique. IF geographic framework operations and systems cannot be modified in time to support this unique structure prior to 2010 THEN the quality of the Puerto Rico enumeration will be significantly reduced.	Maryann Chapin	M	In Census 2000, we were unable to update the geographic framework because the structures were not in place to do so. The geographic framework system allows for the unique structure of the addresses, but if the geographic systems and operations do not collect or do not provide the data back in the unique structure, we will not be able to update or maintain the address frame for later census operations and post-2010.	M	There is great variability in cost implications. It is unclear if other systems will be able to provide or collect the unique address structure and it may be expensive to ensure that these systems can provide the unique address structure back to the Master Address File.	M	There is great variability in 2010 Census baseline schedule impact if systems don't provide the geographic information back in the Puerto Rico address structure.	H	The geographic systems cannot accept addresses from Puerto Rico that are not in the unique address structure. If changes to the systems are needed, there potentially will be major technical impact.	L	Advisory and oversight stakeholders will likely not focus on Puerto Rico issues; rather, their areas of interest will target stateside address issues.	July 2008 - July 2010

2010 Census Risk Register

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RSK-DLG-0014	Open	Data Quality	All operations include quality control and/or quality assurance procedures to ensure pre defined acceptable levels of data quality are obtained. IF Census results do not meet established levels of quality or implement the Quality Control procedure properly THEN corrective measures might need to be implemented resulting in increased cost and delays in the 2010 Census baseline schedule, and/or the reliability of the data may be questioned.	Debbie Bolton	M	There were operations which were not included in the Dress Rehearsal thus we were unable to test the quality control and quality assurance procedures for these operations.	M	If we have to establish new procedures or new operations to correct errors this will result in cost increases.	M	If we have to establish new procedures or new operations to correct error this could result in delays to subsequent operations.	M	If we have to establish new procedures or new operations, systems or operations changes may be impacted.	H	Oversight is interested in the quality of the Census results. If we establish new procedures or new operations they will be interested in the rationale for these changes. In addition, if stakeholders are questioning the reliability of the data, oversight will be involved.	March 2009 - April 2011
RSK-DLG-0015	Open	System(s) Breakdown &/or Integration Problems	The 2010 Census requires key systems to both deliver and integrate to support operational needs. IF key systems cannot deliver core functionality due to either not delivering or integrating with other systems THEN operations may be disrupted and delayed which could increase cost and reduce data quality.	Ronald Thompson	M	There are already problems with the Integration authority, testing, and poor requirements. For example, the first data transmission between Address Canvassing and Master Address File/Topologically Integrated Geographic Encoding and Referencing - 2010 Census baseline schedules are not in alignment on the development and testing of system.	M	There is likely to be some rework or emergency builds during production but these modifications will not be that significant relative to total systems cost (estimated at over \$2B). Cost impact may be greater if integration problems delay or cause rework in the field operations.	H	Integration problems are likely to delay operations or cause rework, but workarounds can probably be developed to continue data movement within the program while integration problems are being resolved.	M	Integration will be primarily around data transmission and data format exchanges. These are not a significant technical issue to resolve in comparison to other issues in the program.	M	Census will be under increased scrutiny regarding increased cost and 2010 Census baseline scheduled delay.	Early 2009 (The first critical handoff occurs when Geography Division delivers spatial data to Field Data Collection Automation Program to support the Address Canvassing operation. A series of handoffs follows this function.)
RSK-DLG-0016	Open	Handheld Solution	Handheld solutions have never been used in a full-scale Address Canvassing and some problems have already been encountered during Dress Rehearsal. IF the handheld computer problems cannot be adequately resolved in time to support Address Canvassing THEN there may be significant cost, 2010 Census baseline schedule impacts and lower data quality. (Includes both hardware and software.)	Maryann Chapin	M	The probability of all functionality on the handhelds and laptops not working is low to medium. The greatest risk is that some functionalities may not perform as planned, however, the expectation is that the solutions will collect critical data as planned.	H	Software and hardware solutions for critical data collection must perform as planned. Significant resources will be devoted to ensure that automation integration is successful.	H	Address Canvassing (first operation) field delays impact the remaining operations. If automation is delayed, then the 2010 Census baseline schedule could be severely impacted.	L	The Census Bureau has spent the decade testing automation and has devoted significant resources to using automation. The current technical solution works. Most problems involve refining performance.	H	Automating the Address Canvassing field operations is a major change from previous censuses. There is significant oversight and monitoring of this change.	October 2008 - August 2009
RSK-DLG-0017	Open	Contract Issues	The Census Bureau is outsourcing huge, critical components of the program. IF requirements are not clearly defined, designs are not adequately reviewed or understood, or progress and changes not tightly monitored and controlled THEN the contractors will not deliver what is needed and the solution will cost more than budgeted.	Ed Pike	H	As the Census Bureau places greater dependence on outsourcing, Program Management Offices are challenged to reach staffing goals and ensure that staff are adequately trained. Without proper training and experience, contract management best practices may not be applied by the Program Management Offices resulting in poorly developed and/or late deliverables from the contractor(s). Furthermore, it is difficult to establish good "partnership" working relationships.	H	Implementing workarounds or making other late program changes will increase costs.	H	Solutions that do not meet stakeholder requirements require "last minute" fixes which will delay operations and increase risk of failure.	H	Making late program changes impacts contractor-provided systems.	H	Cost increase and 2010 Census baseline schedule delays are highly visible to oversight.	April 2008 - September 2013
RSK-DLG-0018	Closed	Late Design Changes	The potential exists for late design changes for all program areas, including the recent move to a paper nonresponse followup. IF late design changes are identified or imposed THEN it will cause massive ripple effects in the total program, system design, and cost.	Kathleen Styles	H	History would tell us that the risk of late content changes is high, but we have lowered this probability with an early decision on the final questions and early planning in general. Late methodological and operational changes are probable.	H	There is great variability in cost implications. A late decision to have an Internet data collection instrument would be hugely expensive; a minor change in the wording of a paper instrument is less costly.	H	Once again, there is great variability in 2010 Census baseline schedule impact.	H	Technical impact to system and operational change could be significant.	H	Any late change results in integration issues and oversight concerns.	May 2008 to September 2013
RSK-DLG-0019	Open	Operational Control System Solutions	The Operations Control System is critical to Census operations. IF there are reliability, performance, or network availability problems with the Operations Control System THEN there may be significant cost and 2010 Census baseline schedule impacts and lower data quality.	Theresa Leslie	H	Only two field paper-based operations were rehearsed in the Dress Rehearsal in the Local Census Office environment and the Operations Control System did not meet the operational needs.	H	The Operations Control System must work. If Operations Control System does not work, it will be very costly to develop ad hoc non-automated control systems.	H	The Operations Control System must be deployed at least 2 1/2 to 3 months prior to the operation to ensure that the operations can begin on time. Automation delays can seriously impact the 2010 Census baseline schedule.	H	To date, most focus has been on automated operations and this has had an impact on the Operations Control System development. Recent experiences indicate difficulties in imparting knowledge and requirements of the Operations Control System to contractors.	H	Cost of contractors developing the control system will be monitored and scrutinized given the current oversight interest in Field Data Collection Automation Program.	October 2008 - June 2011
RSK-DLG-0020	Closed	Failure of Operations and Systems Components	The Dress Rehearsal was not a complete implementation of the all Census 2010 operations. IF these operations and systems requirements are not fully defined, operationalized, and tested as planned THEN it may not be possible to fully implement or evaluate them leading to lower data quality.	Jim Treat	H	There are operations that are currently not fully designed or implemented which could result in lower data quality and a less robust measurement of the operations.	M	Due to the reduced scope in Dress Rehearsal and changes to the 2010 Census design we have not provided the opportunity to fully integrate and test. As undefined requirements are identified this may increase cost to the Census.	H	If these later operations are not fully implemented, this may have effects on the other operations which may have to assimilate these later operations. This could impact the other operations' 2010 Census baseline schedules.	M	If other operations need to be altered to accommodate these later operations not being fully implemented, we may need to make technical changes to other operations that may have to accommodate the later operations.	M	If we do not implement these operations completely, oversight and advisory committees may have concern.	Fall 2007-Fall 2011

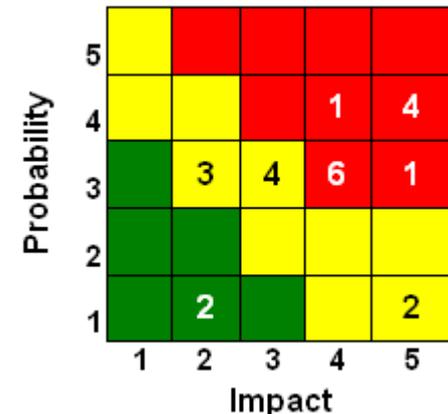
2010 Census Risk Register

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RSK-DLG-0021	Open	System Sizing & Performance Assumptions	System sizing for components such as telephone fulfillment, self-service website, check-in, data capture, worker productivity, help desk, and office space is driven by many assumptions that cannot be tested at full scale. IF performance criteria are incorrect THEN systems may be overloaded during operations or overbuilt, creating 2010 Census baseline schedule delays, cost increase, and low service levels.	Ronald Thompson	M	Estimates for most system capacity are based on empirical data from previous Censuses or test results. We did not fully implement all operations and systems in dress rehearsal. In addition, the same systems may not be able to meet 2010 Census baseline schedule requirements.	M	Assuming most major assumptions (e.g., response rate) are correct, errors in untested assumptions do not affect high cost areas of the program.	H	2010 Census baseline schedule will be substantially impacted if performance is lower than specified.	M	It will be difficult to implement capacity changes quickly if the risk is realized during critical operations. If risk occurs late the systems will not be able to adjust. However, if it occurs early in the process then there will be technical impacts.	M	Some stakeholders may get negative feedback from constituents if Census has poor response time, e.g., during the Telephone Questionnaire Assistance operation.	January 2009 - April 2011
RSK-DLG-0022	Open	Adequate Testing	Due to continuing resolution, design changes and lack of development time, critical opportunities to field test our training, procedures, logistics, and systems for major census operations were lost. IF alternative testing opportunities are not identified and implemented THEN operations may fail resulting in increased costs, lost of data quality (including stateside and Puerto Rico), or delay in the 2010 Census baseline schedule.	Annetta Smith	H	As we move to baseline the 2010 Census schedule and develop the systems the time to conduct testing is running out.	M	System errors identified after design might result in rework which could have a cost impact.	H	System error identified during production could result in substantial delays in the 2010 Census baseline schedule.	M	System errors identified after design might require a redesign of systems and operation.	H	If high visibility systems (Data Access and Dissemination Systems, Decennial Response Integration System , Handheld Computers & Operations Control System) fail due to inadequate testing external stakeholders (including oversight) will be interested.	August 2008 - December 2010
RSK-DLG-0023	Open	Major Disaster's Effect on Population	Major disasters can temporarily affect populations of a geographic area. IF a disaster occurs THEN the ability to execute planned procedures are impacted resulting in increased costs or inaccurate counts.	Annetta Smith	M	In previous censuses, local disasters have occurred that have impacted census operations in the disaster area.	H	In the areas affected by the disaster, the cost could be high to implement revised plans and procedures.	M	In the affected areas, some operations could be delayed or modified.	M	Plans and procedures in the affected areas would require modifications. Systems in other geographic areas could be used to support the affected areas.	H	There would be substantial oversight from many stakeholders in the affected areas.	Any time beginning with Address Canvassing (Spring 2009) through Non-response followup (Summer 2010)
RSK-DLG-0024	Open	Continued Operations of Critical Infrastructure During Disasters	Events can disrupt operations at key facilities (Headquarters - including National Processing Center -, Regional Census Centers, multiple contiguous Local Census Offices, and Data Centers) and supporting infrastructure (Post Office and Telecommunications). IF operations are disrupted THEN there will be increased cost, low data quality, and products may be late.	Theo Schmeackle	M	If a natural or malevolent act denies the use of some of our key facilities or infrastructure the operations of the Census could be disrupted at a local or national level. There need to be some plans in place to put backup facilities or operations in place.	M	There could be cost impacts related to not having the ability to conduct necessary operations. There could also be costs associated with acquiring and making operational secondary facilities and/or infrastructure systems. In certain situations it would be High, Medium or Low so we average the rating. (High probability of missing critical milestones.)	M	There could be 2010 Census baseline schedule impacts related to not having the ability to conduct necessary operations. There could also be costs associated with acquiring and making operational secondary facilities and/or infrastructure systems.	M	Should the denial of use be to key implementing technology such as the Geography system (loss of Bowie Computer Center), processing centers, call centers etc. Then new, backup, or leased systems will need to be implemented.	H	As with any disaster that disrupts service or displaces operations there will be a large amount of scrutiny from outside entities including Advisory and Oversight groups. They will want to know the action plans, contingency plans, operational impacts, etc. They will want to be consulted and advised on a regular basis should an event of this type happen.	Now through 2011
RSK-DLG-0025	Open	Behind Schedule	The Census Bureau is legally mandated to deliver apportionment counts by December 31, 2010 and redistricting data by March 31, 2011. The 2010 Census baseline schedule for meeting those deliveries involves a complex set of activities with limited slack in the 2010 Census baseline schedules at critical milestones. IF the 2010 Census falls behind the 2010 Census baseline schedules by missing key milestones THEN there may be increase cost, low data quality, and/or products may be late.	Jim Treat	M	The 2010 Census is a complex program of 44 operations with strict timeframes/deadlines. The operations are dependent upon each other. In addition, the operations were developed using a set of assumptions. If the operations fail to meet expectations then the program could fall behind 2010 Census baseline schedule.	M	If the operations take longer to perform, this could result in substantial cost overruns, for example if the nonresponse followup workload is larger than expected.	H	This risk is related to 2010 Census baseline schedule delays, thus it is rated high based on that.	M	Getting the program on 2010 Census baseline schedule may require changes to systems and operations, such as cutting scope, operational workarounds, and system design changes.	H	If the Census Bureau fails to deliver the data mandated by law we do not meet our mission.	Spring 2009 through April 2011
RSK-DLG-0026	Open	2010 Operational and Systems Failures	The 2010 Census requires the proper integration of many systems and processes to meet operational needs. The Dress Rehearsal did not include all Census 2010 operations. System sizing for components such as telephone fulfillment, check-in, data capture, and help desk is driven by many assumptions that cannot be tested at production levels. IF the implemented 2010 operations and systems cannot meet the required core functionality and performance requirements THEN there will be increased cost, low data quality, and/or products may be late.	Jim Treat	M	Given the testing plans of the systems and procedures, the likelihood is medium.	M	If there were issues with systems or operations it would not be a complete failure but rather localized failure.	M	If there were issues with systems or operations Census would be able to develop work-arounds that would have limited effects on the schedule.	H	If there were issues the impacts to the overall architecture (technical solution) could be large.	M	If we had a failure of a system or operation, oversight would require insights in to the problem cause and resolution.	Fall 2007-Fall 2011

Risk ID	Status	Risk Name	Risk Statement (Format: Context. IF (risk event), THEN (impact))	Risk Manager	Probability Rating (L,M, or H)	Probability Explanation	Cost Impact Rating (L,M,H, or None)	Cost Impact Explanation	Schedule Impact Rating (L,M,H, or None)	Schedule Impact Explanation	Technical Impact Rating (L,M,H, or None)	Technical Impact Explanation	Oversight/ Advisory Impact Rating (L,M,H, or None)	Oversight/ Advisory Impact Explanation	DATE Risk event could occur
RSK-DLG-0027	Open	FDCA Decentralization	Late in the census cycle, a portion of the FDCA program has been removed from Harris and given to several new providers, including the Census Bureau. IF the scope of the removed FDCA work is not fully covered by the new providers or the providers are unclear about their requirements and responsibilities THEN there may be integration problems resulting in delays, cost increases and reduced functionality.	Jeff Sisson	M	In addition to Harris, there are several more providers now doing the work that we will also need to manage. This is a big human management and integration problem with still scarce resources and some of the resources are now doing development. DRAFT	M	Probably still high but not as high as if we kept Harris DRAFT	M	Decentralizing definitively pushing schedule to the limit DRAFT	M	The interfaces could be confusing and no one wants to own them. DRAFT	M	Seen as trading one set of risks for another. DRAFT	January 2009 through December 2010

Program-level Risks

12 Red - Mitigation plans by Nov 14
 9 Yellow - Mitigation plans by TBD
 2 Green - Mitigation plans by TBD



Name	5x5 Color	Probability	Impact Total	Impact Components			
				Cost	Schedule	Technical	Oversight
Contract Issues	Red	4	5	H	H	H	H
Late Design Change	Red	4	5	H	H	H	H
Operational Control System Solutions	Red	4	5	H	H	H	H
Duplicates and Misses	Red	4	5	M	M	H	H
Security Breach	Red	4	4	H	L	M	H
Handheld Solution	Red	3	5	H	H	L	H
Continued Operations of Critical Infrastructure During Disasters	Red	3	4	M	M	M	H
2010 Operational and Systems Failures	Red	3	4	M	M	H	M
Loss of Confidential Data	Red	3	4	M	M	L	H
Inaccurate Puerto Rico Address List	Red	3	4	M	M	H	L
FDCA Decentralization	Red	3	4	M	M	M	M
Inability to Recruit Sufficient Temporary Workforce	Red	3	4	M	M	L	M
Major Disaster's Effect on Population	Yellow	3	3	H	M	M	H
Data Quality	Yellow	3	3	M	M	M	H
Permanent Staff Retention	Yellow	3	3	L	M	L	M
Behind Schedule	Yellow	3	3	M	H	M	H
Stakeholder Support	Yellow	3	3	M	M	L	H
Immigration Policy Backlash	Yellow	3	3	M	L	M	H

Program-level Risks (cont.)

Name	5x5 Color	Probability	Impact Total	Impact Components			
				Cost	Schedule	Technical	Oversight
Respondent Cooperation	Yellow	3	3	H	M	L	L
Uncertainty of Assumptions in Cost Model	Yellow	1	5	H	H	M	H
Insufficient Funding	Yellow	1	5	H	H	M	M
Continuing Resolution	Green	1	2	H	H	H	M
Exception Enumeration Quality	Green	1	2	L	L	L	H

NEW RISKS

The Risk Review Board approved two new risks:
 DLG.026 - "Operational and Systems Failures"; and
 DLG.027 - "FDCA Decentralization".

CLOSED RISKS

The Risk Review Board approved the closing of the below risks (#s 15, 20, 21, and 22).
 These risks were dropped and replaced by Risk #26 - Operational and Systems Failures.
 DLG.022 Adequate Testing
 DLG.020 Failure of Untested Operations and Systems
 DLG.015 System(s) Breakdown and/or Integration Problems
 DLG.021 System Sizing and Performance Assumptions

Color Change of Risks

The Risk Review Board agreed to change the probability of DLG. 004-Continuing Resolution; and DLG.005-Insufficient Funding to **LOW**.
 This changed the color of DLG.005 from Red to Yellow.