

National Geospatial Advisory Committee – Landsat Advisory Group Statement on Landsat Data Use and Charges¹

The value of Landsat data is internationally recognized as indispensable to science, natural resource management, commerce, security, foreign policy, agriculture, and education. Since 1972, Landsat data have become a critical part of U.S. infrastructure. Like GPS, the National Weather Service, and the National Oceanic and Atmospheric Administration's (NOAA) operational weather satellites, Landsat provides a huge return on the taxpayers' investment.² Landsat enables more efficient science and natural resources management. Its ability to monitor worldwide land surface changes is a proven public good.³ Landsat benefits far outweigh the cost. It is in the U.S. national interest to fund and distribute Landsat data to the public without cost now and in the future.

Overarching recommendation: Landsat data must continue to be distributed at no cost.

Impacts of Charging for Landsat Data

1. **Would severely restrict data use.** The Department of the Interior (DOI) stopped charging for Landsat data in 2008 and its use skyrocketed, soaring from 38 to over 5700 scenes per day.⁴ Imposing charges will again severely restrict data use.
2. **Would violate existing OMB guidelines, Federal Law, OSTP, and U.S. National Space Policy.** Cost-free Landsat data is consistent with existing Office of Management and Budget (OMB) guidelines, Federal Law, Office of Science and Technology (OSTP), and U.S. National Space Policy. No charge should be made for a service when the service can be considered primarily as benefiting broadly the general public.⁵
3. **Would require statutory changes.** Imposing a data charge requires statutory revision. The Land Remote Policy Act mandates Landsat data be made available at no more than the cost of fulfilling a user request (COFUR). COFUR "shall not include any acquisition, amortization, or depreciation of capital assets originally paid for by the United States Government or other costs not specifically attributable to fulfilling user requests."⁶
4. **Would cost more than the amount of revenue generated by the charges.** Technology has automated the data request and distribution process to operate at virtually no cost for fulfilling orders because the internet cost of filling requests is zero. However, collecting payments incurs costs unrelated to the data because users incur costs from using authorized payment mechanisms and DOI incurs costs to invoice, track, and process payments.
5. **Would create a circular payment basis for public agencies.** Landsat data users are overwhelmingly public agencies. Charging them for data results in circular payments among government entities.
6. **Would stifle innovation and business activity that creates jobs.** Increased use is the starting point of value. Free data catalyzes innovation. It leads to unpredictable applications, products, and decision-making that requires investigation and data analysis within specific disciplines.⁷ The Government's and taxpayers' return is downstream of data access. Free data fuels significant business activity that creates jobs, generates tax revenue, protects property, protects the environment, and saves lives.⁸
7. **Would inhibit data analysis in scientific and technical analyses.** Free data availability results in major direct and indirect gains in efficiency. Data analysis in scientific and technical analyses renders information that, in turn, more efficiently applies science and technology to practical problems and issues.⁹
8. **Would negatively impact international relations relating to national, homeland, and food Security.** Landsat provides a continuous transparent global view of resources over time, allowing for the

identification and monitoring of the causes of some conflicts related to natural resource needs and extreme climate events. Landsat data is a critical source for the Department of Agriculture's national and international crop estimates and food security analyses.¹⁰

9. **Would negatively impact foreign policy and U.S. standing as the leader in space technology.** Landsat data products have been and remain important instruments of U.S. foreign policy because they remind other countries of U.S. leadership in space technology and U.S. dedication to using space¹¹ for the "benefit of all mankind."¹²

Benefit of a free National Satellite Land Remote Sensing Data Archive

"To serve the public interest, both the Legislative and Executive Branches authorized Archive development at the highest levels of law and policy making. The Archive has been directed to provide services beyond those traditionally associated with an archive. In addition to ensuring long-term preservation of land remote sensing data, the Archive is also mandated to provide meaningful and timely access to its resources. The USGS/EROS Data Center must maintain an in-house specialized, scientific and technical core capability to archive and access data. This will allow the Archive to fulfill its mission, meet statutory and policy responsibilities, provide a continuing capability, support research and development, and meet emergency requirements."¹³

The Archive's continuous data from 1972 – 2012 is an unequalled historical record of U.S. land change and use that increases in value over time and with the addition of new data. The most valuable use of Landsat data is land change and water use detection and analysis.¹⁴

¹ This paper was approved by the NGAC Landsat Advisory Group on June 22, 2012 and adopted by the NGAC as a whole on September 18, 2012. The members of the Landsat Advisory Group are: Kass Green (Chair) Kass Green & Associates; John Copple, Sanborn Map Co.; David Cowen (NGAC Chair) Univ. of South Carolina; Joanne Irene Gabrynowicz, Univ. of Mississippi; Rick Landenberger, Americaview; Roger Mitchell, MDA Information Systems, Inc.; Tony Spicci, State of Missouri; Cory Springer, Ball Aerospace & Technologies Corp.; Darrel Williams, Global Science & Technology, Inc.; Tony Willardson, Western States Water Council.

² A Plan for a U.S. National Land Imaging Program, Office of Management and Budget, http://www.landimaging.gov/fli_iwg_report_print_ready_low_res.pdf; The Users, Uses, and Value of Landsat and Other Moderate-Resolution Satellite Imagery in the U.S., <http://pubs.usgs.gov/of/2011/1031/>; Improving the Way Government Does Business. The Value of Landsat Moderate Resolution Imagery in Improving Decision-Making. http://calval.cr.usgs.gov/wordpress/wp-content/uploads/Pindilli_JACIE_Presentation_final.pdf, V. Adams, E. Pindilli. 2012.

³ The Value Proposition for Ten Landsat Applications, NGAC Landsat Advisory Group (draft paper, June 2012).

⁴ Chart 1. Over 8 million scenes have been downloaded from 2008–2012. Source: DOI.

⁵ OMB Circular No. A-25 User Charges, 6. A. 4.; OSTP Memorandum from John Marburger to Cabinet August 13, 2004; OSTP Memorandum from John Marburger to Cabinet, Dec. 23, 2005; U.S. National Space Policy, June 28, 2010.

⁶ "COST OF FULFILLING USER REQUESTS.—The term 'cost of fulfilling user requests' means the incremental costs associated with providing product generation, reproduction, and distribution of unenhanced data in response to user requests and shall not include any acquisition, amortization, or depreciation of capital assets originally paid for by the United States Government or other costs not specifically attributable to fulfilling user requests." 51 U.S.C. 60101.

⁷ The Value Proposition for Ten Landsat Applications, NGAC Landsat Advisory Group (draft paper, June 2012).

⁸ ASPRS Survey and Australian Report, cited in A Plan for a U.S. National Land Imaging Program, Office of Management and Budget, http://www.landimaging.gov/fli_iwg_report_print_ready_low_res.pdf; ACIL Tasman (2010) *The Economic Value of Earth Observation From Space*, Report prepared for the Cooperative Research Centre for Spatial Information (CRC-SI) and Geoscience Australia, at <http://www.crcsi.com.au/Industry/Industry-Reports/Economics-of-earth-observation>

⁹ For example, the growing use of Landsat data in water management. *A Quick Comparison of Ground Water Monitoring Costs as a Reason to Maintain the Thermal Band on the Landsat Data Continuity Mission* Anthony Morse, Idaho Department of Water Resources. (On file with the Committee.)

¹⁰ The Value Proposition for Ten Landsat Applications, NGAC Landsat Advisory Group (draft paper, June 2012).

¹¹ Remote Sensing and the Private Sector: Issues for Discussion—A Technical Memorandum, (Washington, D. C.: U.S. Congress, Office of Technology Assessment, OTA-TM-ISC-20, March 1984), pg. 29.

¹² National Aeronautics and Space Act of 1958, sec. 102 (a).

¹³ *Report to the Secretary of the Interior from the National Satellite Land Remote Sensing Data Archive Advisory Committee*, January 25, 1999. <http://eros.usgs.gov/archive/nslrda/advisory/whitepaper.html>

¹⁴ Chart 2

Chart 1: Total Landsat Scenes Selected By Users Since October 1, 2008¹⁵

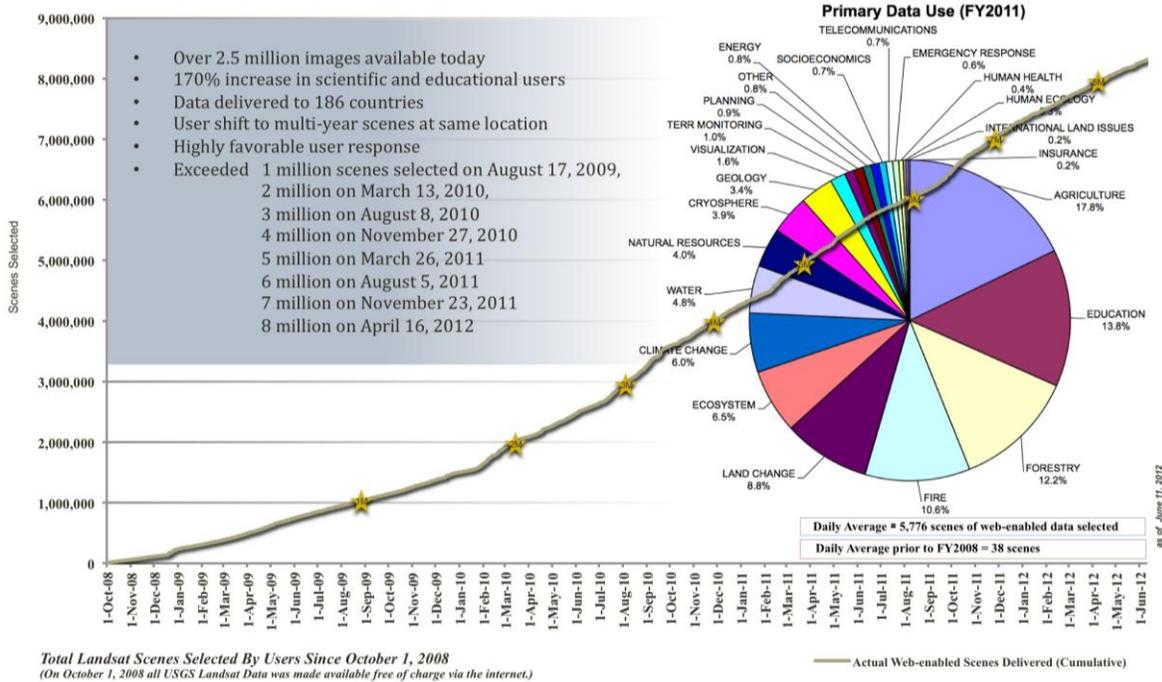


Chart 2: Mt. St. Helens Over 30 Years¹⁶



Landsat MSS imagery 1975



Landsat 7 imagery 2005

¹⁵ Source: Department of the Interior, U.S. Geological Survey, May 2012.

¹⁶ These two Landsat infrared images show Mt. St. Helens before and after the volcano erupted on May 18, 1980.