

National Mapping Division  
U.S. Geological Survey  
512 National Center  
Reston, VA 22092

703-648-4135  
FTS-959-4135

Office of Budget and Program Development

August 12, 1991

**NOTE**

To: Tom Reed

From: Charlene Raphael

Subject: HR 2449 Landsat Continuity Act

Wording of the final bill has not changed from the draft we reviewed July 29; therefore, our comments remain the same.

Although NMD must support the Administration's position regarding funding of competing programmatic priorities in which the conversion of early Landsat data to a stable storage medium did not prevail, NMD strongly concurs with Sec. 5 regarding the Preservation of Early Landsat Data.

U.S. Geological Survey  
101 National Center  
Reston, VA 22092

Office of the Director

Congressional Liaison Office <sup>18</sup> JULY 17, 1991  
Mail Stop 112, x4455

To: NMD

Subject: H.R. 2449 "Landsat  
Continuity Act"

Please review the attached bill and advise us of any potential impact on USGS programs. It should be noted that "no comment" indicates no opinion either way. If you concur with the legislation, say so; if you disagree with it, state that and explain why.

We would appreciate receiving your comments by

Aug. 7 8

  
Tom Reed

Remarks: Please return all of the attached material to our office with your comments.



102D CONGRESS  
1ST SESSION

# H. R. 2449

To encourage the uninterrupted continuation of the Landsat remote-sensing satellite program, and for other purposes.

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## IN THE HOUSE OF REPRESENTATIVES

MAY 23, 1991

Mr. BROWN (for himself, Mr. MCCURDY, Mr. WALKER, Mr. SCHEUER, Mr. HALL of Texas, and Mr. PACKARD) introduced the following bill; which was referred to the Committee on Science, Space, and Technology

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## A BILL

To encourage the uninterrupted continuation of the Landsat remote-sensing satellite program, and for other purposes.

1        *Be it enacted by the Senate and House of Representa-*  
2        *tives of the United States of America in Congress assembled,*

3        **SECTION 1. SHORT TITLE.**

4        This Act may be cited as the "Landsat Continuity  
5        Act".

6        **SEC. 2. FINDINGS.**

7        The Congress finds that—

8                (1) the Nation's land-remote-sensing program  
9        represents one of the most important applications of

1 space technology for the betterment of human socie-  
2 ty;

3 (2) the continuous historical record provided by  
4 Landsat data, and the continuation of the Landsat  
5 system beyond Landsat 6, are essential for global  
6 change and other long-term environmental research;

7 (3) Operation Desert Storm demonstrated the  
8 vital national security uses of Landsat data;

9 (4) the Landsat program has substantial com-  
10 mercial potential but is unlikely to become a self-  
11 sustaining commercial enterprise until after the year  
12 2000;

13 (5) although the United States developed the  
14 technology for land-remote-sensing, its competitive  
15 position has eroded substantially due to foreign com-  
16 petition and the absence of a stable policy frame-  
17 work;

18 (6) on June 1, 1989, the President announced  
19 that the United States is committed to ensure the  
20 continuity of Landsat-type remote-sensing data to  
21 meet civil, commercial, national security, and foreign  
22 policy needs;

23 (7) unless the United States Government com-  
24 mits funding for a follow-on satellite to Landsat 6,

1 the Landsat program will end in the mid- to late-  
2 1990's;

3 (8) the procurement of long-lead parts and ma-  
4 terials for a follow-on spacecraft to Landsat 6 would  
5 shorten spacecraft development time, thus decreas-  
6 ing the chance of a disruptive gap in data continuity  
7 between the projected end of Landsat 6 operations  
8 and the launch of a successor;

9 (9) because Landsat data has valuable applica-  
10 tions throughout the Federal Government, and since  
11 this data has commercial value, the continuation of  
12 this program should involve cost-sharing among  
13 more than one Federal agency and, to the extent  
14 practicable, with the private sector;

15 (10) the continuous Landsat data archive dat-  
16 ing to the program's beginning in 1972 represents  
17 the fruits of the Nation's investment in land-remote-  
18 sensing, and its preservation is essential for under-  
19 standing global change; and

20 (11) as much as one-fourth of the early  
21 Landsat data will be lost in the next few years un-  
22 less additional funding is provided for data conver-  
23 sion and related activities.

1 **SEC. 3. LONG-LEAD PROCUREMENT FUNDING.**

2 (a) There are authorized to be appropriated  
3 \$20,000,000 for fiscal year 1992 for the procurement of  
4 long-lead parts for the development of a follow-on to the  
5 Landsat 6 spacecraft, of which—

6 (1) \$5,000,000 shall be authorized to the Na-  
7 tional Aeronautics and Space Administration;

8 (2) \$5,000,000 shall be authorized to the Na-  
9 tional Oceanic and Atmospheric Administration; and

10 (3) \$10,000,000 shall be authorized to the De-  
11 partment of Defense.

12 (b) To the extent practicable, funds appropriated  
13 under subsection (a) shall be used to procure long-lead  
14 items which are common to other spacecraft currently  
15 being procured by the agencies identified in subsection (a).

16 (c) If the United States Government fails to provide  
17 additional funding for the development and launch of a  
18 follow-on satellite to Landsat 6 during the fiscal year 1993  
19 budget process, then the long-lead items procured as pro-  
20 vided in subsection (b) shall be made available for other  
21 United States satellite programs.

22 **SEC. 4. NATIONAL SPACE COUNCIL ACTION.**

23 The National Space Council, in coordination with the  
24 Congress and the Committee on Earth and Environmental  
25 Sciences, shall, by October 1, 1991, establish policy recom-  
26 mendations for carrying out the President's commitment

1 to maintaining the continuity of Landsat data,  
2 including—

3 (1) plans and programs for a successor to  
4 Landsat 6;

5 (2) organizational options and recommendations  
6 for acquiring Landsat data for global change re-  
7 search, national security, environmental manage-  
8 ment, and other governmental purposes; and

9 (3) options and recommendations for encourag-  
10 ing the use of Landsat data by commercial firms  
11 and development of the commercial market for such  
12 data.

13 **SEC. 5. PRESERVATION OF EARLY LANDSAT DATA.**

14 In order to preserve early Landsat data which may  
15 be lost due to tape degradation and to make these data  
16 accessible for global change research and other purposes,  
17 there are authorized to be appropriated to the Secretary  
18 of the Interior \$5,000,000 for fiscal year 1992.

○

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Office of Budget and Program Development

July 29, 1991

NOTE

To: Tom Reed  
From: Charlene Raphael *Charlene*  
Subject: HR 2449 Landsat Continuity Act

Although NMD must support the Administration's position regarding funding of competing programmatic priorities in which the conversion of early Landsat data to a stable storage medium did not prevail, NMD strongly concurs with Sec. 5 regarding the Preservation of Early Landsat Data. If authorized and appropriated, the proposed \$5 million would be used as indicated in the attached capability statement.

Attachment

National Mapping Division  
U.S. Geological Survey  
512 National Center, Reston, VA 22092  
Office of Budget and Program Development

703-648-4135  
FTS-959-4135

June 5, 1991

**NOTE**

To: Tom Reed

From: Charlene Raphael 

Subject: HR 2449 Landsat Continuity Act

NMD affirms George Brown's remarks relative to the value of Landsat data and the immediate need for its preservation before it is lost by deterioration of its current storage medium.

Although NMD must support the Administration's position regarding funding of competing programmatic priorities in which the conversion of early Landsat data to a stable storage medium did not prevail, NMD strongly concurs with Sec. 5 regarding the Preservation of Early Landsat Data. If authorized and appropriated, the proposed \$5 million would be used as indicated in the attached capability statement.

Attachment

*Cys to Watkins, Thorley, Rohde & Bettinger*

## FY 1992 Capability Statement

Bureau/Office: U.S. Geological Survey  
Appropriation: Surveys, Investigations, and Research  
Activity/Subactivity: National Mapping, Geography and Surveys/Information  
Data Systems  
Proposed Amendment: \$5 million increase to preserve Landsat data  
collected in the 1970's

Current program: The Global Change Data Systems program element, Land Data Management component supports the development, preservation, management, and distribution of land-related earth science data to meet global change research needs. It includes the development and implementation of the necessary systems to convert the existing archive of over 1 million Landsat TM and MSS scenes acquired since 1972, a \$2 billion Federal investment, to stable storage media to ensure their preservation. The process involves 1) the conversion of the existing, slowly degrading, high-density digital and analog tapes to a durable storage medium, and 2) the upgrading of existing data retrieval and processing systems as necessary to provide for the reproduction and dissemination of these data. The system to convert Landsat TM data (acquired since 1982) to a durable medium will begin operating in FY 1992 with conversion completed in FY 1994. A limited number of products can be made from post-1978 MSS data using existing systems, but approximately 400,000 scenes of MSS Wide-Band Video Tape (WBVT) data acquired from 1972 to 1978 cannot be accessed until they have been converted to a modern stable storage medium. Moreover, it is estimated that 50% of the 400,000 scenes will be irretrievably lost if the conversion is not carried out in the near future. No funds are currently available for conversion of these pre-1979 MSS data.

Amount budgeted FY 1992: \$0

Feasibility: The President's 1992 Budget proposes significant increases in a number of programs within the Department of the Interior, while supporting efforts to meet domestic discretionary funding limits set forth in the Budget Enforcement Act of 1990. Any increase above the President's Budget request will need to be offset by corresponding reductions in other projects or programs so that domestic discretionary funding limits can be met. The budget request represents a balanced approach to addressing earth science issues in the context of the overall budget constraints.

A feasibility study would be conducted to determine the best method for converting the 400,000 pre-1979 Landsat MSS scenes from the deteriorating wide-band video tapes to stable storage media. The increased funding would support design and implementation of the conversion hardware and software system to accomplish conversion of these data within the next 4 years to minimize data loss.

Capability: The USGS EROS Data Center (EDC) has served as the world's principal Landsat data management center since 1972. PL 98-365, the Land Remote Sensing Commercialization Act of 1984, recognized the critical importance of maintaining Landsat data for future long-term scientific analysis and assigned this responsibility to the Federal government. The Landsat Archive is maintained at the USGS EDC. A 1990 GAO report supports EDC's data conversion efforts. HR 1988, the FY 1992 NASA Authorization bill, and accompanying report 102-41 document the consensus of the scientific community regarding the value of the Landsat data archive.

Outlay effect: +\$5,000,000

Proposed by: Honorable George E. Brown, Jr., Representative, California

National Mapping Division  
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512 National Center, Reston, VA 22092  
Office of Budget and Program Development

703-648-4135  
FTS-959-4135

May 29, 1991

**NOTE**

To: Gene Thorley  
Wayne Rohde

From: Charlene Raphael

Subject: H.R. 2449 Landsat Continuity Act

Attached are the "Landsat Rescue" Bill and remarks by Representative George Brown introducing the legislation to the House on 5/23. This Bill was the basis for the capability statement we recently submitted to the Appropriations Committee.

Please review the legislation and provide your comments, concurrence, impacts by COB 6/3/91. Still no indication of whether, how, or from whence offsets would be taken to cover the \$5M for Landsat preservation. Will keep you informed as news develops.

Thanks

Attachments

A handwritten signature in black ink, appearing to read "Charlene Raphael", with a long horizontal flourish underneath.

U.S. Geological Survey  
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Reston, VA 22092

Office of the Director

Congressional Liaison Office  
Mail Stop 112, x4455

To: NMD

Subject: H.R. 2449, "Landwest  
Continuity Act"

Please review the attached bill and advise us of any potential impact on USGS programs. It should be noted that "no comment" indicates no opinion either way. If you concur with the legislation, say so; if you disagree with it, state that and explain why.

We would appreciate receiving your comments by

June 4

  
Tom Reed

Remarks: Please return all of the attached material to our office with your comments.



cc: 101/102  
104  
801

-----No. 2 of 7-----

Bill, Sponsor and Short Title:

H.R.2449 by BROWN, GEORGE (D-CA) -- Landsat Continuity Act

Official Title (caption):

A bill to encourage the uninterrupted continuation of the Landsat  
remotesensing satellite program, and for other purposes.

Introduced on Thursday, May 23, 1991

Committee Referrals:

HOUSE COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

Most Recent Action:

05/23/91 -- In The HOUSE

Introduced by BROWN, GEORGE (D-CA)

Referred to HOUSE COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

Remarks by BROWN, GEORGE (D-CA) in "Congressional Record" (CR Page H-3615)

LEGI-SLATE Subject Terms Used in Your Search:

Currently, none

Paragraphs Containing Your Search Words:

Full text of this bill is not yet available

-----No. 3 of 7-----

Bill, Sponsor and Short Title:

H.R.2459 by HERGER (R-CA) -- Forest and Rangeland Renewable Planning Act of  
1974, Amendment

Official Title (caption):

A bill to amend the Forest and Rangeland Renewable Planning Act of 1974 to  
provide for the salvage of catastrophically damaged National Forest System  
timber, and for other purposes.

Introduced on Thursday, May 23, 1991

Committee Referrals:

HOUSE COMMITTEE ON AGRICULTURE

Most Recent Action:

05/23/91 -- In The HOUSE

Introduced by HERGER (R-CA)

Referred to HOUSE COMMITTEE ON AGRICULTURE

LEGI-SLATE Subject Terms Used in Your Search:

Disasters, catastrophies

Disaster preparedness and relief

Paragraphs Containing Your Search Words:

Full text of this bill is not yet available

[Mr. BENTLEY addressed the House. Her remarks will appear hereafter in the Extensions of Remarks.]

The SPEAKER pro tempore. Under a previous order of the House, the gentleman from New York [Mr. OWENS] is recognized for 60 minutes.

[Mr. OWENS of New York addressed the House. His remarks will appear hereafter in the Extensions of Remarks.]

The SPEAKER pro tempore. Under a previous order of the House, the gentleman from Georgia [Mr. GINGRICH] is recognized for 60 minutes.

[Mr. GINGRICH addressed the House. His remarks will appear hereafter in the Extensions of Remarks.]

#### LANDSAT CONTINUITY ACT

The SPEAKER pro tempore. Under a previous order of the House, the gentleman from California [Mr. BROWN] is recognized for 60 minutes.

Mr. BROWN. Mr. Speaker, today I introduced legislation aimed at helping maintain the U.S. Landsat Program, which represents one of the Nation's most important spacecraft systems. Joining me as original cosponsors of the Landsat Continuity Act are Representatives DAVE MCCURDY, BOB WALKER, JAMES SCHUEER, RALPH HALL, and RON PACKARD.

The purpose of this legislation is to initiate procurement on the next in the series of U.S. civilian Earth observation satellites—Landsat 7—through the authorization of \$20 million for long-lead procurement items. The legislation also provides \$5 million for the preservation of early Landsat data, which will soon be lost unless converted to a stable medium.

Landsat images of the Earth are used for such purposes as ~~used for~~ environmental management, oil and gas exploration, crop forecasting, and cartography. Landsat data were used extensively during Operation Desert Storm, providing data not available from any other national system. The Department of Defense considers Landsat data to be mission essential for many of its tasks. Similarly, NASA and the scientific community regard Landsat imagery as being vital for global change research.

I could go on at length about the importance of the Landsat Program for global monitoring, mapping, and management applications, but that is not the purpose of my remarks today. The case has already been made within the U.S. Government that Landsat is a vital program, and the administration has reached a decision to continue the program, as reflected by White House press releases dated June 1 and November 18, 1989.

The earlier of these press releases described the President's approval of the National Space Council's recommendations concerning Landsat, which

included ensuring the continuity of Landsat-type remote sensing data through the 1990's. The second release announced the President's approval of a new national space policy which commits the Nation to the continuation of Landsat and to the encouragement of U.S. leadership in this field through the development of future systems "competitive with, or superior to, foreign-operated civil or commercial systems."

I commend the administration for recognizing the broad national and international value of Landsat and for its commitment to the continuation of this program. However, I must point out that there exists a major discrepancy between the President's established commitment to continuity for Landsat and the reality of achieving that continuity. That is what I wish to address in these remarks, and it is that discrepancy that has led me and a number of my distinguished colleagues to introduce the Landsat Continuity Act.

The first Landsat spacecraft was launched in 1972 and Landsats have operated continuously for the past 19 years. This unbroken record of information about the Earth represents an invaluable data base, and the longer it remains an unbroken record the more valuable it will be for assessing long-term changes on the surface of the planet. This data base represents the fundamental baseline for global change research and for overall management of the resources of our planet.

At the present time, we have two aging Landsat spacecraft in orbit. Landsat 4, the older of the two, could cease operations at any time. Landsat 5 is expected to remain operational until the launch of Landsat 6, scheduled for mid-1992. Landsat 6 will have a 5-year design life, and given the time it takes to construct a follow-on, we should already be planning for the construction of that follow-on spacecraft to have it ready for a mid-1997 launch. But we are not doing so.

In order to accomplish the two stated goals of U.S. Landsat policy which I mentioned above—data continuity and competitiveness with international systems—the initiation of funding for Landsat 7 probably should have been reflected in the fiscal year 1990 budget. It wasn't. The administration did not request Landsat 7 money in its fiscal year 1990, fiscal year 1991, or fiscal year 1992 budgets. This is a serious problem, as I will explain.

The contracting and construction process for a follow-on to Landsat 6 could take anywhere from 6 to 8 years, according to the National Oceanic and Atmospheric Administration [NOAA], which prepared a series of Landsat 7 procurement schedules for the administration last September.

The quickest option for construction of Landsat 7 would be to build a spacecraft identical to Landsat 6, and to do

so with a sole source contract to the companies which built Landsat 6. Under this scenario, according to NOAA, the launch of Landsat 7 would occur in February 1998. This would mean an 8-month data gap between the projected end of Landsat 6 and the initial operation of Landsat 7.

A second option would be to construct a follow-on spacecraft identical to Landsat 6, but recompile the contract. This option might lower the Government's costs, yet would likely add 12 to 18 months in additional procurement activities to the spacecraft contracting and development schedule. As a result, the launch date for Landsat 7 would be pushed off until early 1999. This would mean a 20-month data gap between the end of operations for Landsat 6 and the arrival of Landsat 7.

A final option would be to build an advanced Landsat 7, with a state-of-the-art capability such as a sensor that provides five-meter stereo imagery. Such a spacecraft would help satisfy a broad array of national security, scientific, and commercial needs—and would clearly meet the goal of achieving a U.S. remote sensing capability competitive with or superior to any foreign-operated system. However, this option could add even more time to the spacecraft development process, leading to a launch date that might not be until the year 2000. If that were the case, there would be a 3-year data gap between the expected end of Landsat 6 and the operation of Landsat 7.

These procurement schedules were based on the assumption that NOAA—the Federal agency which has managed Landsat—receives a go-ahead from the Office of Management and Budget in the fall of 1991 and initial funding in the fiscal year 1993 budget.

These three procurement options suggest that we will experience a data gap in the program ranging from a minimum of 8 months to as long as 3 years, assuming that we make a fiscal year 1992 decision to proceed with Landsat 7. Thus, it may already be too late to achieve the U.S. policy goal of data continuity for this program. While one might hope that Landsat 6 has a longer operational life than 5 years, that should not be the basis for our program plans, since the opposite could happen as well. Landsat 6 could have technical problems that shorten its operational life or it could even be destroyed during launch as the result of a launch vehicle failure.

Shortening the construction time for Landsat 7 could be accomplished by paying a premium to the subcontractors to accelerate development of the sensor and spacecraft components, yet this would increase the cost and risk associated with the program. The procurement schedule for Landsat 7 could also be shortened through an abbreviated contracting process. The original Landsat contract between the United

States and EOSAT" was written to cover the construction costs of two spacecraft—Landsat 6 and Landsat 7. In April 1988, that contract was modified and a "stop work" order was placed on Landsat 7. By simply lifting that "stop work" order, the Government could cut the development time for Landsat 7 by 6 months by avoiding a full new contracting process.

The best way of accelerating the development of Landsat 7, however, would be through the initiation of long-lead procurement for the spacecraft—and to do so immediately. That is, the objective of the Landsat Continuity Act, which could trim an additional 6 months from the development schedule for Landsat 7 by starting the procurement of the spacecraft and sensor components which take the longest time to manufacture.

Through these two approaches—lifting the stop work order on Landsat 7 and initiating long-lead procurement during fiscal year 1992—there is a reasonable chance of having Landsat 7 built and ready for launch by mid-1997.

This plan would achieve the U.S. policy objective of ensuring continuity of Landsat data. Any other plan—such as putting the Landsat 7 funding decision off until fiscal year 1993—would essentially guarantee a damaging data gap in the program. Yet the administration's position seems to be precisely that—to delay making a decision on Landsat 7 for yet another year.

Mr. Speaker, for the record, I think it is important for my colleagues to know the extent to which the decision on Landsat 7 already has been postponed.

In March 1989, Vice President QUAYLE addressed the issue of continuation of the Landsat Program as the first item taken up by the newly formed National Space Council. The crisis of that time was whether the United States would cease operation of Landsat 4 and Landsat 5 for lack of \$9.4 million in operating funds. The Space Council, with the Vice President's leadership, successfully resolved the matter by raising the necessary funding from the Departments of Defense, Agriculture, and Interior, and he initiated a full interagency review of the Landsat Program and the options for Landsat 7.

In response to a letter signed by more than 100 Members of Congress expressing opposition to the planned termination of Landsat 4 and Landsat 5, the Vice President wrote on March 27, 1989, that the National Space Council staff, in conjunction with all affected Government agencies, was conducting a "fast-paced policy review" of Landsat which would lead to a review of options within the next several months.

In response to repeated contacts with the National Space Council throughout the summer and fall of 1989, members of the Science, Space, and Technology Committee were in-

formed that a decision on Landsat 7 would be made in time to affect the administration's fiscal year 1991 budget.

In late 1989, I wrote the Vice President again to express my concern that it did not seem that the Landsat 7 issue was being addressed in a timely fashion. I also expressed my deep concern about rumors that the Office of Management and Budget had recommended that the Department of Defense take control of the program. The response from the Vice President, dated December 20, 1989, said that the Space Council was still reviewing the issue and that "we plan to replace Landsat 6 in about 1996."

When the fiscal year 1991 budget was submitted to Congress in February 1990, no money was requested for Landsat 7, although articles in the trade press indicated that the administration was considering a supplemental request for the program.

Another year passed, and still no action on Landsat 7. In November 1990, 25 Members of Congress, including myself, wrote OMB Director Richard Darman stating that the time had come to initiate funding for Landsat 7 and to urge that the necessary funding be provided in the President's fiscal year 1992 budget.

A few months later, on February 26, 1991, my distinguished colleague and ranking minority member of the Science, Space, and Technology Committee, BOB WALKER, and I wrote the Vice President again. Landsat 7 funding was not contained in the President's fiscal year 1992 budget request, which led us to write that we were "particularly concerned about the delay in implementing the President's commitment to maintaining the continuity of Landsat-type data" and that we felt the Nation "must ensure that adequate planning takes place this year" to initiate a successor to Landsat 6.

On March 21, 1991, the Vice President replied that the National Space Council was planning to initiate two additional studies "to provide data in support of the Landsat follow-on decision." The letter stated further that a decision on the "post-1997 Landsat capability will be made concurrent with the President's fiscal year 1993 budget."

While this sounds like a specific commitment to request funding for Landsat 7 in next year's budget, I have to emphasize that I have heard this commitment before—many times—and have yet to see it honored. I have also seen at least a dozen different studies that were intended to support the nation's decision about Landsat 7. The time has come to stop studying Landsat 7 and start building it. We have postponed this decision for so long that we are jeopardizing the investments we have made in the program over the past 20 years and our position as a world leader in this technology.

The single most important concern expressed by military and civilian

users of Landsat is data continuity; people who have invested in the image processing systems for this data and who have developed a reliance on Landsat for their research, national security planning, commercial activities, and resource management purposes want to know that the system will still be around 5, 10, and 15 years from now. They want to know that the continuous record of Landsat data—which represents a chronicle of change on the planet—will remain an unbroken data archive. That is why these users were greatly relieved by the President's commitment to continuity of Landsat data, and why they are deeply concerned about the repeated delays in making a commitment to Landsat 7.

While I will be the first to admit that there remain significant policy and management decisions to be made concerning this program—such as the extent to which we continue the commercialization effort and the division of responsibilities among the Federal agencies with an interest in the program—I do not feel that these issues should serve as justification for adding further delay to the initiation of Landsat 7.

Within the Science, Space, and Technology Committee I have initiated a Landsat Task Force to address and to resolve to the extent possible these outstanding policy and management issues. My intention is to work closely with the National Space Council, as well as with other major committees in the House and with the other body, to forge a new policy consensus on how to regain U.S. leadership in this important technology.

I recognize that the National Space Council has other items on its plate, such as security funding for the Space Station Freedom. So, too, do I. But this issue is a very important one and cannot be put off any longer. Landsat may not be as visible a program as is the Space Station or the Space Exploration Initiative, but it is a program of great importance to our Nation and the world.

We are moving into an information era in which knowledge about our planet will be increasingly important for our Nation's economic competitiveness, national security, environmental management, and quality of life. Other nations recognize that remote sensing satellites can contribute substantially toward these goals, which is why France, Japan, Canada, the European Space Agency, India, and Brazil are all planning Earth observation satellites for operation during the 1990's. France, of course, already operates a system called SPOT, which is competing against Landsat for the global commercial market for satellite imagery. The French understand the importance of data continuity, as shown by the fact that they launched SPOT 1 in 1986, SPOT 2 in 1990, are building SPOT 3 for a mid-1990's launch, and

have already paid for SPOT 4, scheduled for a late-1990's launch.

The U.S. pioneered this technology and was the unchallenged world leader until 5 years ago, but our position has eroded substantially and is now seriously in question. Although we are pressing forward with the Earth Observing System (EOS) as part of the U.S. Global Change Program, no sensor aboard EOS will provide high resolution, multispectral data analogous to what is generated from Landsat. Indeed, the design of EOS was predicated on the assumption that Landsat would continue.

We should not postpone the decision on Landsat 7 any further. We should make the commitment this year to initiate long-lead procurement for Landsat 7, with the goal of having the spacecraft built and ready for launch before Landsat 6 reaches the end of its design life.

The Landsat Continuity Act would authorize \$20 million in long-lead funding for Landsat 7—\$10 million from the Department of Defense, and \$5 million each from the National Aeronautics and Space Administration and the National Oceanic and Atmospheric Administration. This 50:50 military-civilian split in funding responsibility for the program seems like a logical way to proceed, given the broad national security and civilian applications of the program. The original co-sponsors of this legislation, including myself, are already working to incorporate the \$20 million long-lead procurement package into the relevant fiscal year 1992 authorization and appropriation bills.

We are also working to secure \$5 million for the preservation of aging Landsat data that could soon be permanently lost. A report completed last year—but not yet officially released—by the administration's Committee on Earth and Environmental Sciences concluded that as much as one-fourth of the Landsat data collected in the first few years of the program will be lost in the next several years unless action is taken to accelerate a program to convert this aging data to a stable medium. The continuous Landsat data archive dating back to the program's beginning in 1972 represents the fruits of our investment in remote sensing. Because the preservation of this archive will be so important for global change research, we should move promptly to appropriate the \$5 million necessary to protect this old, yet still valuable data.

I urge my colleagues to join us in co-sponsoring the Landsat Continuity Act, and I urge the administration to work with the Congress to take the necessary steps to fulfill the Nation's policy commitment to continuation of the Landsat Program.

□ 1700

### THE SPREADING EPIDEMIC OF AIDS

The SPEAKER pro tempore. Under a previous order of the House, the gentleman from Indiana [Mr. BURTON] is recognized for 60 minutes.

Mr. BURTON of Indiana. Mr. Speaker, I will tell the staff that I will not take the full 60 minutes. I will probably be here about 10 minutes, so that as the last Member with a special order, we should not be here too long.

Mr. Speaker, today the New England Journal of Medicine published an editorial which is very significant. About 5 years ago, I and a number of my colleagues started talking about the AIDS epidemic. We started talking about the spread of this terrible disease and what it means for the health of this Nation. We talked about the possibility that millions of Americans could become ill from the AIDS virus and die if we did not take some positive action.

In 1985, when we started, 20,000 Americans were either dead or dying of the AIDS virus. That was about 5 years ago. At the end of 1991, 205,000 Americans, one-fifth of a million, will be dead or dying of the AIDS virus and the pandemic has been spreading and expanding each year.

In 1985, 1986, and 1987, they estimated that for each one of those years there were 1½ to 2 million people infected and they estimated that the virus was spreading at a rate of doubling every year to 18 months.

The CDC in Atlanta now tells us we still have 1½ to 2 million people infected and that the pandemic is under control.

The facts do not bear that out. The virus is now being spread in ways that we did not believe was possible just a few short years ago.

Dr. Everett Koop a few years ago indicated some things in a publication that was sent to every household in America. I would like to just read a little bit of some of the things that he said. I quote from the CONGRESSIONAL RECORD of February 25, 1987. In it I quoted the Koop report. Dr. Koop at that time was the Surgeon General of the United States. He said:

There is no danger of AIDS virus infection from visiting a doctor, a dentist, a hairdresser, a hospital or a beautician. You may have wondered why your dentist wears gloves and perhaps a mask when treating you. This does not mean that he has AIDS or that he thinks you do. He is simply protecting himself from hepatitis, common colds and so forth.

Well, we know that Dr. Koop was wrong, because in Florida several patients obtained the terrible virus of AIDS from a dentist who was infected with it. We did not know that until the dentist was dead, or about to die, and he sent letters to many of his patients telling them he was infected with the AIDS virus. Several of those patients have contracted AIDS, even though the dentist wore gloves, a

mask and other protective paraphernalia that Dr. Koop said only intended to protect himself from hepatitis back in 1987.

The fact of the matter is that we did not know then all the ways that AIDS could be transmitted and we do not know yet all the ways that AIDS can be transmitted, but what we do know is that there is a long latency period between the time a person contracts AIDS and when he manifests the disease in his physical being.

□ 1710

Sometimes doctors estimate that people could carry the disease, the virus, for as many as 5 to 10 years without any manifestation of actually having AIDS.

In all that time they are healthy, at least, cheerleaders, business people, all that time there would be no manifestation of the disease whatsoever in their physical being. During that time, unless they have been tested, had a blood test, they would be running on their merry way, conducting themselves in a manner to which they are accustomed, without any regard for themselves or their fellow men. They are a walking epidemic if they have sexual contact with people outside the AIDS community.

Thus we have, according to CDC, probably 2 million infected with the AIDS virus.

Many of us, myself included, believe we have more like 5 million to 6 million or more. We have no way of knowing for sure, but based on the information we received years ago that it was doubling every year to 18 months, we should have at least 5 million people infected.

Ninety-five percent of those people do not know they have the virus, and those people are out day in and day out conducting themselves in a manner that may or may not be conducive to good public health.

The fact of the matter is the AIDS virus is being spread on a daily basis to many unsuspecting people because the person giving it to them does not know they have AIDS and the person involved in the sexual contact with them certainly does not know that as well.

The answer to the problem: We suggested back in 1987 a multifaceted plan to deal with the health of this Nation. We talked about education. Dr. Koop said we needed education. I agree with that.

But beyond that, he said, there was not much you could do other than use condoms or other devices to protect yourself or your partner from getting the AIDS virus.

But there are other things we can do. In addition to education, we should have testing. Every person in this country could be tested at a cost of about \$5 per person or less. We know this to be a fact because the U.S. Army, the military, has been doing this for years, and they have had a

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102d CONGRESS  
1ST SESSION

H. R. 2449

IN THE HOUSE OF REPRESENTATIVES

Mr. BROWN (for himself, Mr. MCCURDY, Mr. WALKER, Mr. SCHEUER, Mr. HALL of Texas, and Mr. PACKARD) introduced the following bill; which was referred to the Committee on Science, Space, and Technology.

A BILL

To encourage the uninterrupted continuation of the Landsat remote-sensing satellite program, and for other purposes.

- 1 Be it enacted by the Senate and House of Representatives
- 2 of the United States of America in Congress assembled,

1 SECTION 1. SHORT TITLE.

2 This Act may be cited as the "Landsat Continuity Act".

3 SEC. 2. FINDINGS.

4 The Congress finds that--

5 (1) the Nation's land-remote sensing program  
6 represents one of the most important applications of  
7 space technology for the betterment of human society;

8 (2) the continuous historical record provided by  
9 Landsat data, and the continuation of the Landsat system  
10 beyond Landsat 6, are essential for global change and  
11 other long-term environmental research;

12 (3) Operation Desert Storm demonstrated the vital  
13 national security uses of Landsat data;

14 (4) the Landsat program has substantial commercial  
15 potential but is unlikely to become a self-sustaining  
16 commercial enterprise until after the year 2000;

17 (5) although the United States developed the  
18 technology for land-remote sensing, its competitive  
19 position has eroded substantially due to foreign  
20 competition and the absence of a stable policy framework;

21 (6) on June 1, 1989, the President announced that the  
22 United States is committed to ensure the continuity of  
23 Landsat-type remote sensing data to meet civil,  
24 commercial, national security, and foreign policy needs;

1           (7) unless the United States Government commits  
2 funding for a follow-on satellite to Landsat 6, the  
3 Landsat program will end in the mid- to late-1990's;

4           (8) the procurement of long-lead parts and materials  
5 for a follow-on spacecraft to Landsat 6 would shorten  
6 spacecraft development time, thus decreasing the chance  
7 of a disruptive gap in data continuity between the  
8 projected end of Landsat 6 operations and the launch of a  
9 successor;

10          (9) because Landsat data has valuable applications  
11 throughout the Federal Government, and since this data  
12 has commercial value, the continuation of this program  
13 should involve cost-sharing among more than one Federal  
14 agency and, to the extent practicable, with the private  
15 sector;

16          (10) the continuous Landsat data archive dating to  
17 the program's beginning in 1972 represents the fruits of  
18 the Nation's investment in land-remote sensing, and its  
19 preservation is essential for understanding global  
20 change; and

21          (11) as much as one-fourth of the early Landsat data  
22 will be lost in the next few years unless additional  
23 funding is provided for data conversion and related  
24 activities.

25 SEC. 3. LONG-LEAD PROCUREMENT FUNDING.

1 (a) There are authorized to be appropriated \$20,000,000  
2 for fiscal year 1992 for the procurement of long-lead parts  
3 for the development of a follow-on to the Landsat 6  
4 spacecraft, of which--

5 (1) \$5,000,000 shall be authorized to the National  
6 Aeronautics and Space Administration;

7 (2) \$5,000,000 shall be authorized to the National  
8 Oceanic and Atmospheric Administration; and

9 (3) \$10,000,000 shall be authorized to the Department  
10 of Defense.

11 (b) To the extent practicable, funds appropriated under  
12 subsection (a) shall be used to procure long-lead items which  
13 are common to other spacecraft currently being procured by  
14 the agencies identified in subsection (a).

15 (c) If the United States Government fails to provide  
16 additional funding for the development and launch of a follow-  
17 on satellite to Landsat 6 during the fiscal year 1993 budget  
18 process, then the long-lead items procured as provided in  
19 subsection (b) shall be made available for other United  
20 States satellite programs.

21 **SEC. 4. NATIONAL SPACE COUNCIL ACTION.**

22 The National Space Council, in coordination with the  
23 Congress and the Committee on Earth and Environmental  
24 Sciences, shall, by October 1, 1991, establish policy  
25 recommendations for carrying out the President's commitment

1 to maintaining the continuity of Landsat data, including--

2 (1) plans and programs for a successor to Landsat 6;

3 (2) organizational options and recommendations for

4 acquiring Landsat data for global change research,

5 national security, environmental management, and other

6 governmental purposes; and

7 (3) options and recommendations for encouraging the

8 use of Landsat data by commercial firms and development

9 of the commercial market for such data.

10 **SEC. 5. PRESERVATION OF EARLY LANDSAT DATA.**

11 In order to preserve early Landsat data which may be lost

12 due to tape degradation and to make these data accessible for

13 global change research and other purposes, there are

14 authorized to be appropriated to the Secretary of the

15 Interior \$5,000,000 for fiscal year 1992.

COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY  
U.S. HOUSE OF REPRESENTATIVES  
WASHINGTON, D.C. 20515

DATE: 5-28-91

TO: Tom Kugel

FROM: Curt STANKERT

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COMMENTS: