

**WTP Sample Design
Content to be used for Full Survey**

Sample Design for WTP – the versions for Question #46 in the full survey (view in Qualtrics):

- 50% of respondents receive original WTP
- 25% of respondents receive WTP Trust Fund Per Image
- 25% of respondents receive WTA

NOTE TO REVIEWERS: The dollar amounts used in the willingness to pay (WTP) questions were developed based on the following factors. The WTP questions were used in a previous survey (2012). The range of costs were tested for that survey and were initially developed based on the average cost per scene that Landsat users paid for Landsat imagery prior to 2008. These values are used in the current survey and have been adjusted for inflation. We have a lookup table created with the “assigned bid” and an “up / down” value. The “up / down” values are referenced from the lookup table based on the participant response. The initial “assigned bid” is randomly assigned to each participant – again using the lookup table that was developed with all the WTP values. We are using the Qualtrics survey platform. In Qualtrics, we are able to create an “assigned bid” for each participant by referencing a lookup table that contains the assigned bids and the “up / down” values.

(This is Q46 in Qualtrics.)

a) Original WTP Question – used in 2012 and used for 2018 federal users. This version of the question includes the original Protest Response Questions.

NOTE TO REVIEWERS: 50% of the respondents will view (a) content when answering this question.

In the event that Landsat imagery was no longer available, you may have to obtain imagery elsewhere. Assume that you are restricted to your current project or organization budget level and that the money to pay any cost for replacement imagery and additional software or training would have to come out of your existing budget. **If you had to pay for imagery that was equivalent to currently available Landsat imagery, would you pay \$XXX for one scene covering the area equivalent to a Landsat scene?**

*If they say Yes, the dollar amount steps up with the same wording above repeated.
If they say No, the dollar amount steps down, with the same wording above repeated.
If they say No again, we ask the \$1 question.*

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“Yes” Logic Pattern

47. Since in your response to the previous question you indicated you would pay \$XXX for imagery, please indicate how you would pay this added cost in terms of categories from your existing budget you would reduce or your ability to pass this cost onto your clients, whether inside your organization/agency or outside your organization/agency. Please check only one.

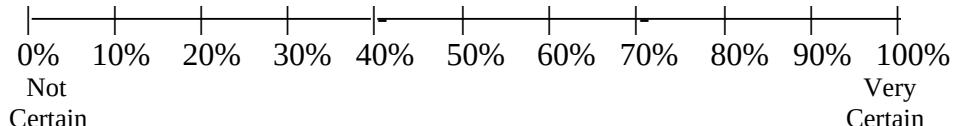
- Reduce money spent on travel
- Reduce money spent on other computer software or hardware
- Reduce amount spent on hiring of personnel or salaries

Attempt to pass cost onto clients
 Other (please explain): _____

PAGE BREAK

“Yes” Logic Pattern

48. How certain are you that you would pay \$XXX for the imagery? Please slide the circle to the percentage that best represents your answer. (This is a slider bar in Qualtrics.)



“Yes” Logic Pattern

49. Assume that you are restricted to your current project or organization budget level and that the money to pay any cost for replacement imagery and additional software or training would have to come out of your existing budget. Approximately how many fewer scenes (if any) would you buy per year if each scene cost \$XXX? Please write a whole number in the box below. (Open-ended – limit 10 characters)
(Text Entry Validation – Numerical Value in Qualtrics.)

PAGE BREAK

“Yes” Logic Pattern

50. If the cost was \$(1.25x bid amount in Q46), would you pay this amount for one scene covering the area equivalent to a Landsat scene?

Yes
 No → “L”, Q59

PAGE BREAK

“Yes” Logic Pattern

51. Approximately how many fewer scenes (if any) would you buy per year if each scene cost \$(1.25x original)? Please write a whole number in the box below. (Open-ended – limit 10 characters)
(Text Entry Validation – Numerical Value in Qualtrics.)

PAGE BREAK

“Yes” Logic Pattern

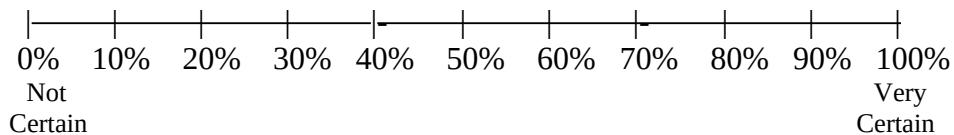
52. At what price per scene would it not be possible to complete a typical task or project you work on? → “L”, Q59

Price per Scene

PAGE BREAK

“No” Logic Pattern

53. How certain are you that you would not pay \$XXX for the imagery? Please select the percentage that best represents your answer. (This is a slider bar in Qualtrics.)



PAGE BREAK

“No” Logic Pattern

54. If the cost was $(0.75 \times \text{bid amount in Q46})$, would you pay this amount for one scene covering the area equivalent to a Landsat scene?

- Yes → *DISPLAY LOGIC for Q55*
- No → Q56

PAGE BREAK

“No” Logic Pattern

55. Approximately how many scenes (if any) would you buy per year if each scene cost $(0.75 \times \text{original})$? Please write a whole number in the box below. (Open-ended – limit 10 characters) → “L”, Q59

PAGE BREAK

“No” Logic Pattern

56. If the cost was \$1, would you pay this amount for one scene covering the area equivalent to a Landsat scene?

- Yes → *DISPLAY LOGIC for Q57*
- No → Q58

PAGE BREAK

“No” Logic Pattern

57. Approximately how many scenes would you buy per year if each scene cost \$1? Please write a whole number in the box below. (Open-ended – limit 10 characters) → “L”, Q59
(Text Entry Validation – Numerical Value in Qualtrics.)

PAGE BREAK

“No” Logic Pattern

58. Why you would not pay \$1 for the imagery? Please check all that apply.

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- Landsat imagery is not worth that much money to me.
- My projects/organization cannot afford to pay that much for Landsat imagery.
- Even if I wanted to, I do not have a way to pay for the imagery (e.g., do not have a credit card or other electronic method of payment available).
- Landsat imagery should be provided free of charge since my tax dollars already paid for it.
- I would use other imagery available at no cost.
- Our projects would not be possible without access to Landsat imagery.
- This function of our agency, organization, business, etc. would no longer be viable if we had to pay for imagery.
- I am concerned that my answer will be used to set a price to charge for Landsat in the future.
- Other (*please explain in the text box below*)

(This is “Q46_TF_PerImage” in Qualtrics – Block “Question #46TFPerImage”.)

b) New WTP Questions focused on trust fund contributions per image.

NOTE TO REVIEWERS: 25% of the respondents will view (b) content when answering this question.

The current and proposed federal budgets provide sufficient funding to maintain the current Landsat program, but not for building and launching the replacement to Landsat 8, namely Landsat 9. Landsat 9 is equivalent to Landsat 8 with a likely launch in 2021. The cost of building and launching Landsat 9 has increased in recent years. In order to provide funding for building and launching Landsat 9, a trust fund would be established. The per image download fee would provide money that would be used exclusively for the purpose of building and launching Landsat 9. Assume that you are restricted to your current project or organization budget level and that the money to pay any cost for replacement imagery and additional software or training would have to come out of your existing budget. If Landsat 9 is not built there may be no Landsat satellite images after Landsat 8 becomes inoperable, sometime during the 2023 time period. **Would you pay \$XXX per image into this trust fund for building and launching Landsat 9, and replacing Landsat 8?**

If they say Yes, the dollar amount steps up with the same wording above repeated.

If they say No, the dollar amount steps down, with the same wording above repeated.

If they say No again, we ask the \$1 question.

PAGE BREAK

“WTPTFPerImageYes” Logic Pattern

(This is “Q47TFPIYES” in Qualtrics – Block “WTPTFPerImageYES / Questions #47 - #52 & #59 - #61”.)

47. Since in your response to the previous question you indicated you would pay \$XXX into a Landsat trust fund, please indicate how you would pay this added cost in terms of categories from your existing budget you would reduce or your ability to pass this cost onto your clients, whether inside your organization/agency or outside your organization/agency. Please check only one.

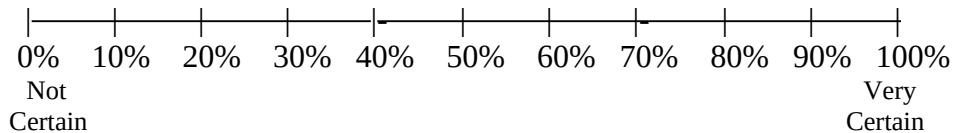
- Reduce money spent on travel
- Reduce money spent on other computer software or hardware
- Reduce amount spent on hiring of personnel or salaries
- Attempt to pass cost onto clients
- Other (please explain): _____

PAGE BREAK

“WTPTFPerImageYes” Logic Pattern

(This is “Q48TFPIYES” in Qualtrics – Block “WTPTFPerImageYES / Questions #47 - #52 & #59 - #61”.)

48. How certain are you that you would pay \$XXX into a Landsat trust fund? Please slide the circle to the percentage that best represents your answer. (This is a slider bar in Qualtrics.)



“WTPTFPerImageYes” Logic Pattern

(This is “Q49TFPIYES” in Qualtrics – Block “WTPTFPerImageYES / Questions #47 - #52 & #59 - #61.”)

49. Approximately how many fewer scenes (if any) would you buy per year if each scene cost \$XXX? Please enter the number in the box below. (Text Entry Validation – Numerical Value in Qualtrics.)

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“WTPTFPerImageYes” Logic Pattern

(This is “Q50TFPIYES” in Qualtrics – Block “WTPTFPerImageYES / Questions #47 - #52 & #59 - #61”.)

50. If the cost was $\$(1.25 \times \text{bid amount in Q46})$, would you pay this amount per image into the Landsat trust fund?

- Yes
- No → “L”, Q59

-PAGE BREAK-

“WTPTFPerImageYes” Logic Pattern

(This is “Q51TFPIYES” in Qualtrics – Block “WTPTFPerImageYES / Questions #47 - #52 & #59 - #61”.)

51. Approximately how many fewer scenes (if any) would you buy per year if each scene cost \$(1.25x original)? Please write a whole number in the box below. (Open-ended – limit 10 characters)

(Text Entry Validation – Numerical Value in Qualtrics.)

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“WTPTFPerImageYes” Logic Pattern

(This is “Q52TFPIYES” in Qualtrics – Block “WTPTFPerImageYES / Questions #47 - #52 & #59 - #61”.)

52. At what price per scene would it not be possible to complete a typical task or project you work on? → “L”, Q59

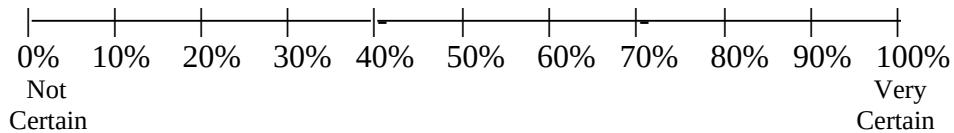
Price per Scene

PAGE BREAK

“WTPTFPerImageNo” Logic Pattern

(This is “Q53TFPINO” in Qualtrics – Block “WTPTFPerImageNO / Questions #53 - #61”.)

53. How certain are you that you would not pay \$XXX per scene into the Landsat trust fund? Please select the percentage that best represents your answer. (This is a slider bar in Qualtrics.)



PAGE BREAK

“WTPTFPerImageNo” Logic Pattern

(This is “Q54TFPINO” in Qualtrics – Block “WTPTFPerImageNO / Questions #53 - #61”.)

54. If the cost was $(0.75 \times \text{bid amount in Q46})$, would you pay this amount per scene into the Landsat trust fund?

- Yes → DISPLAY LOGIC for Q55
- No → Q56

PAGE BREAK

“WTPTFPerImageNo” Logic Pattern

(This is “Q55TFPINO” in Qualtrics – Block “WTPTFPerImageNO / Questions #53 - #61”.)

55. Approximately how many fewer scenes (if any) would you buy per year if each scene cost $(0.75 \times \text{original})$? Please write a whole number in the box below. (Open-ended – limit 10 characters) → “L”, Q59

PAGE BREAK

“WTPTFPerImageNo” Logic Pattern

(This is “Q56TFPINO” in Qualtrics – Block “WTPTFPerImageNO / Questions #53 - #61”.)

56. If the cost was \$1, would you pay this amount per scene into the Landsat trust fund?

- Yes → DISPLAY LOGIC for Q57
- No → Q58

PAGE BREAK

“WTPTFPerImageNo” Logic Pattern

(This is “Q57TFPINO” in Qualtrics – Block “WTPTFPerImageNO / Questions #53 - #61”.)

57. Approximately how many scenes would you buy per year if each scene cost \$1? Please enter the number in the box below. → “L”, Q59
(Text Entry Validation – Numerical Value in Qualtrics.)

PAGE BREAK

“WTPTFPerImageNo” Logic Pattern

(This is “Q58TFPINO” in Qualtrics – Block “WTPTFPerImageNO / Questions #53 - #61”.)

58. Why you would not pay \$1 per scene into the Landsat trust fund? Please check all that apply.

- Landsat imagery is not worth that much money to me.
- My projects/organization cannot afford to pay that much for Landsat imagery.
- Even if I wanted to, I do not have a way to pay for the imagery (e.g., do not have a credit card or other electronic method of payment available).
- Landsat imagery should be provided free of charge since my tax dollars already paid for it.
- I would use other imagery available at no cost.
- Our projects would not be possible without access to Landsat imagery.
- This function of our agency, organization, business, etc. would no longer be viable if we had to pay for imagery.
- I am concerned that my answer will be used to set a price to charge for Landsat in the future.
- Other (*please explain in the text box below*)

(This is Q46WTA in Qualtrics.)

c) WTA Question.

As a current Landsat imagery user, we understand you use one or more Landsat program products. If you were to switch from your current use of Landsat imagery to some other imagery product or imagery source then there may be a cost associated with that change. **Would \$XXX per image be sufficient to cover the cost of obtaining and using new imagery from a source other than Landsat? NOTE TO REVIEWERS: 25% of the respondents will view (c) content when answering this question.**

If they say YES, then GO DOWN TO A LOWER \$ AMOUNT.

If they say NO, then GO UP TO A HIGHER \$ AMOUNT.

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“WTAYes” Logic Pattern

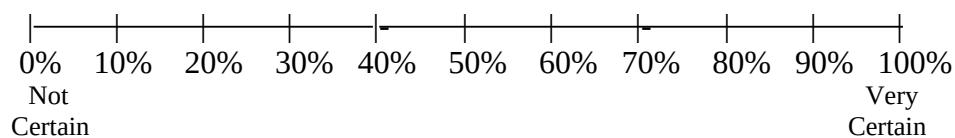
47. In your previous question you indicated you would need \$XXX per scene in order cover the cost of obtaining and using new imagery from a source other than Landsat. Please tell us what costs would increase for you and your organization if you were using a new source of imagery other than Landsat? Please check only one.

- Retrain technical staff
- Retrain end users
- Reprogramming software to utilize the new source of imagery
- Other (please explain): _____

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“WTAYes” Logic Pattern

48. How certain are you that you would need \$XXX per scene for replacement imagery?
Please slide the circle to the percentage that best represents your answer. (This is a slider bar in Qualtrics.)



PAGE BREAK

If they say Yes, then GO DOWN TO A LOWER \$ AMOUNT.

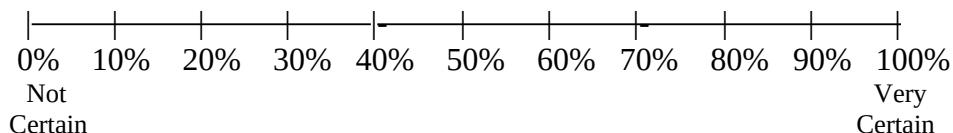
50. Would $(0.75 \times \text{bid amount in Q46})$ be sufficient to cover the cost per scene of using replacement imagery?

- Yes → Q56 (Go Down to \$1)
- No → Q58

PAGE BREAK

“WTANo” Logic Pattern

53. How certain are you that \$XXX per scene would not cover the cost of obtaining and using new replacement imagery? Please slide the circle to the percentage that best represents your answer. (This is a slider bar in Qualtrics.)



PAGE BREAK

If they say No, then GO UP TO A HIGHER \$ AMOUNT.

54. Would $(1.25 \times \text{bid amount in Q46})$ be sufficient to cover the cost per scene of using replacement imagery?

- Yes → “L”, Q59 (Go to Demographic Section)
- No → Q58

PAGE BREAK

“WTAYes” Logic Pattern

56. Would \$1 per scene be sufficient to cover the cost of using replacement imagery?

- Yes → “L”, Q59 (Go to Demographic Section)
- No → Q58WTA

PAGE BREAK

If respondents say “NO”, “NO”, then we ask:

(This is Q58WTA in Qualtrics.)

58. Why would that not be a sufficient amount of money for the imagery? Please check all that apply.

- It would be very costly and disruptive to change our imagery operation from Landsat to any other imagery provider.
- It is just not possible for me to determine what I would have to be compensated to change from using Landsat imagery.
- I do not have a good idea of what it would cost me, as I nearly always rely upon free imagery such as Landsat.
- It is unlikely that I would get a budget increase large enough to pay for replacement imagery.
- Even if I wanted to, I do not have a way to pay for other imagery (e.g., do not have a credit card or other electronic method of payment available).
- Our projects would not be possible without access to Landsat imagery.
- This function of our agency, organization, business, etc. would no longer be viable if we had to pay for imagery.
- I am concerned that my answer will be used to set a price to charge for Landsat in the future.
- Other (*please explain in the text box below*)

Initial Bid Amounts for ALL scenarios (WTP Original, WTP Trust Fund Per Image, & WTA):

Dollar Values to Use		
Initial	Down	Up
55	40	80
80	55	110
110	80	190
220	135	330
330	220	440
440	330	650
550	380	800
650	500	980
800	650	1300
1100	800	1600
1600	1300	2200
2200	1600	3300
2700	2200	4400

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