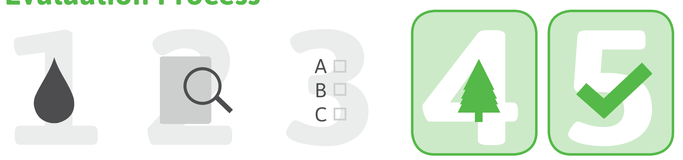
Evaluation Process

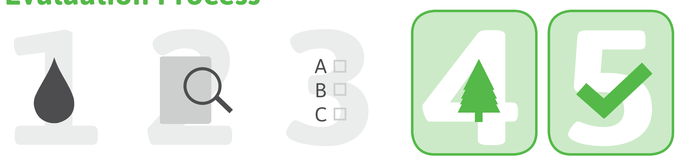


Welcome!

The purpose of this meeting is to:

- Present the detailed screening evaluation of flood mitigation alternatives and strategies for the Ames Community.
- Gather feedback on the strategies to present to the City Council.

Evaluation Process



The Study

Method

Collect public input, develop and analyze alternatives and strategies, summarize impacts.

Focus

Determine impacts—positive and negative—of flood mitigation alternatives and strategies.

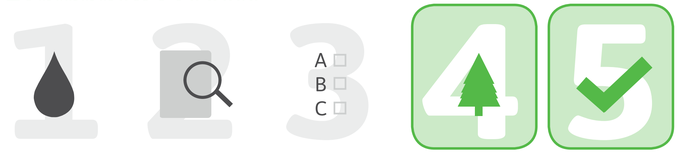
Goal

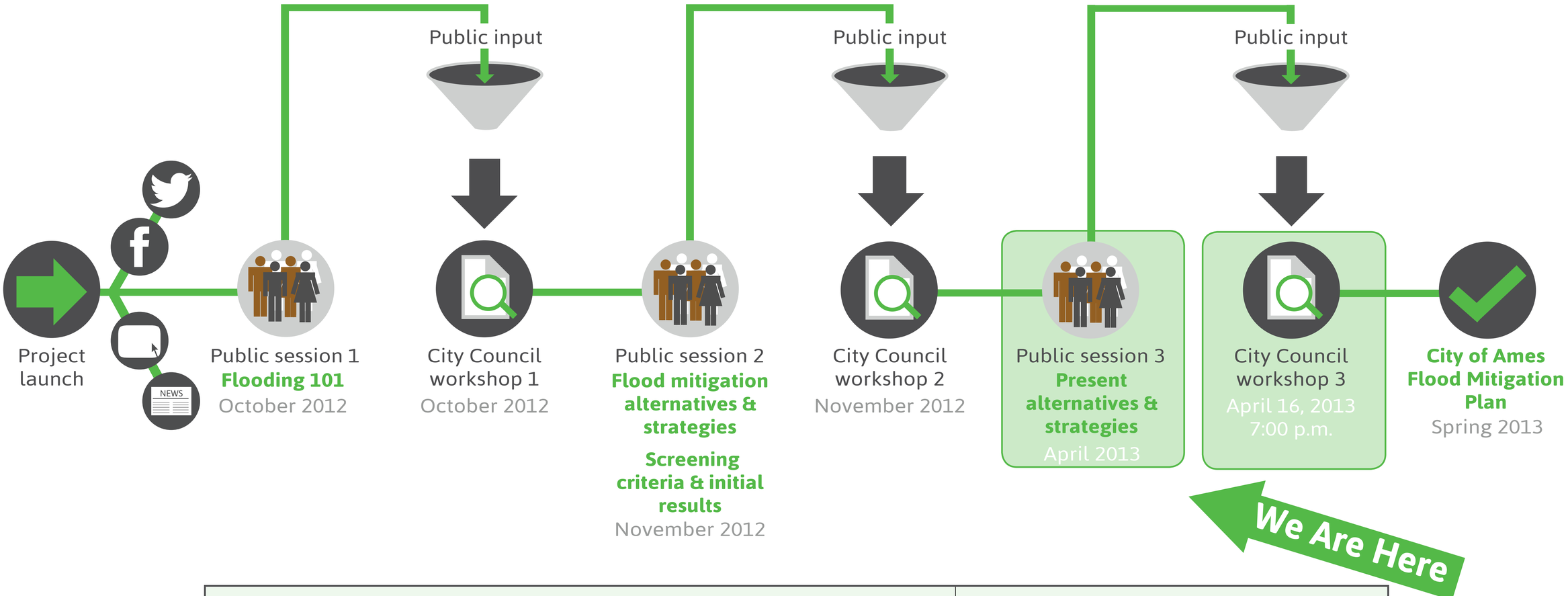
Present the best alternatives and strategies to City Council.

City of Ames Flood Mitigation Study

Community Involvement

Evaluation Process





Website Visits	2,151 page views
Online Meeting Participation	540 visits
Public Session 1 Meeting Attendance	98 attendees
Public Session 2 Meeting Attendance	58 attendees
Comments Received	173 comments

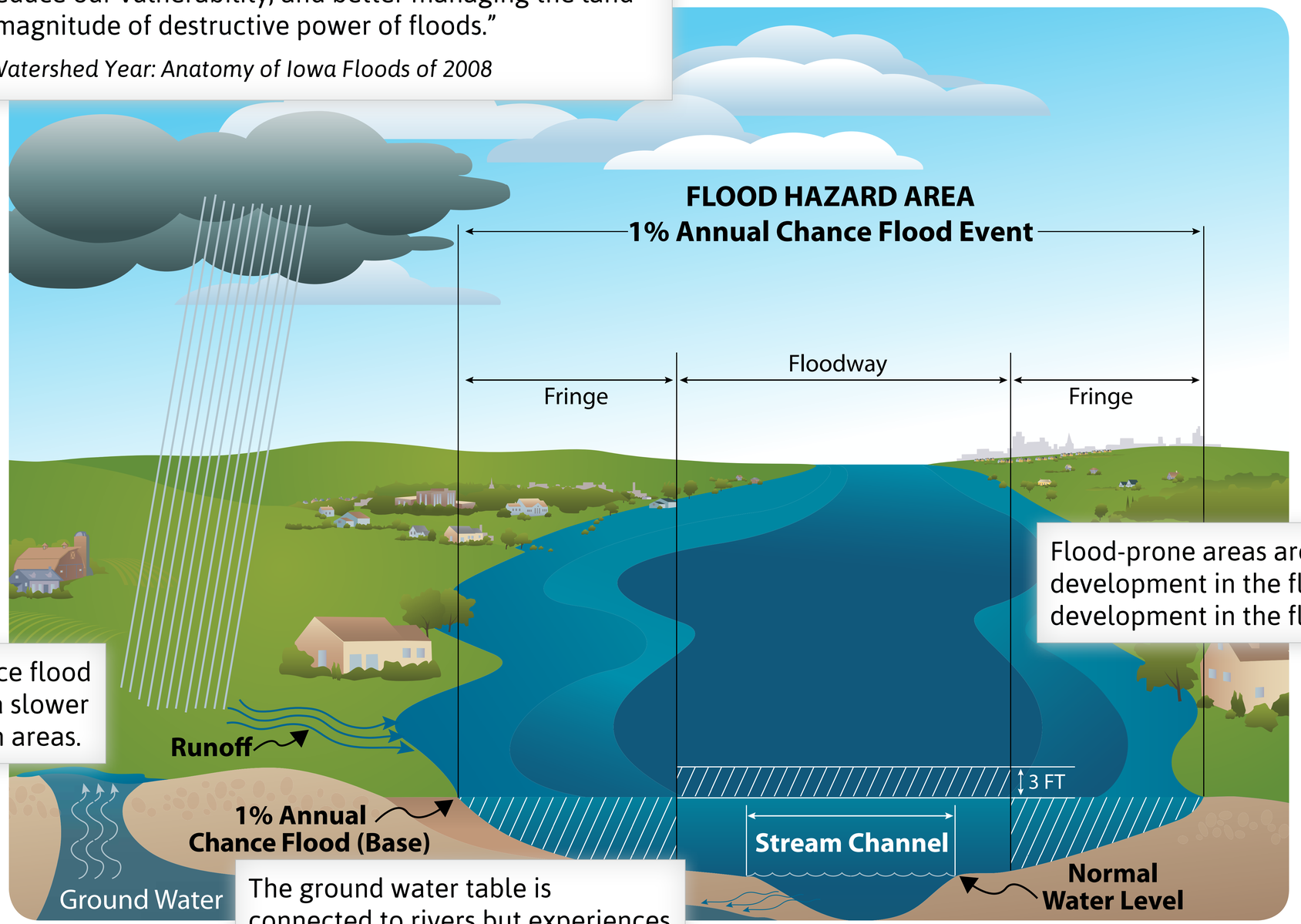
Evaluation Process

1 2 3 4 5

Flooding 101

"Living with floods involves two broad activities: better managing the risks and taking steps to reduce our vulnerability, and better managing the landscape to reduce the magnitude of destructive power of floods."

--Connie Mutel, *A Watershed Year: Anatomy of Iowa Floods of 2008*



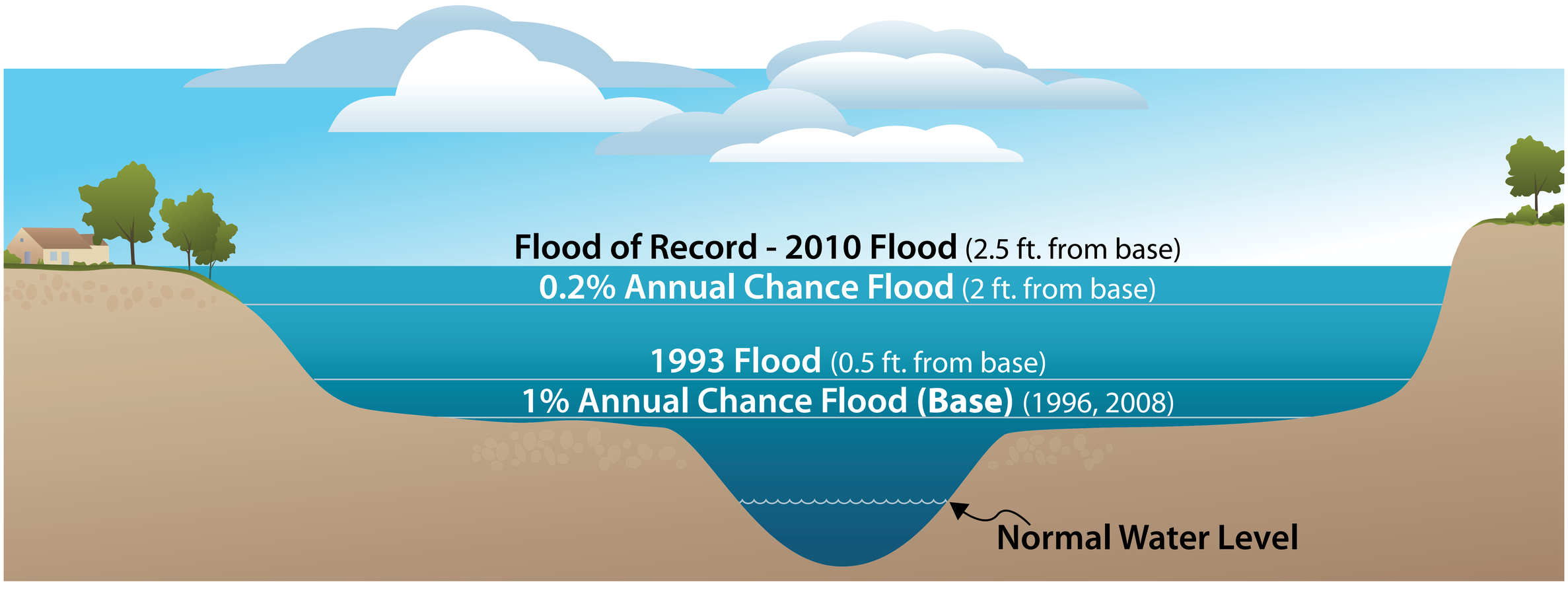
Rural areas produce flood causing runoff at a slower rate than do urban areas.

Flood-prone areas are managed by restricting development in the floodway, but allowing development in the floodway fringe.

The ground water table is connected to rivers but experiences a delayed response to flood waters. Ground water rises in a flood event.

Flooding 101

Evaluation Process



River Cross Section at Skunk River (below confluence with Squaw Creek)

Evaluation Process

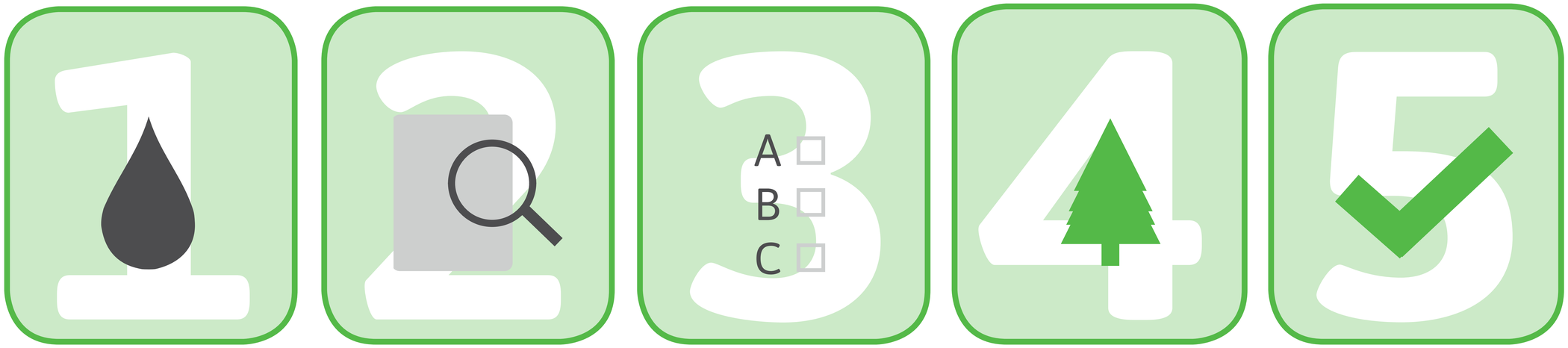
1 2 3 4 5

Flood Hydrology

The study team updated flood magnitudes and frequencies by engineering and statistical calculations and reviewed and updated flood maps.

USGS Gage	Source	Annual flood-probability discharge (cfs)			
		10-percent	2-percent	1-percent	0.2-percent
South Skunk River near Ames, IA	Updated FFA	6,800	10,200	11,600	14,900
	FEMA Effective Flows	6,280	9,000	10,100	12,600
Squaw Creek at Ames, IA	Updated FFA	8,260	15,800	20,000	32,600
	FEMA Effective Flows	7,570	13,700	17,000	26,300
South Skunk River below Squaw Creek near Ames, IA	Updated FFA	14,500	24,100	28,900	41,800
	FEMA Effective Flows	12,700	19,700	23,000	31,400

Evaluation Process



Since we last met in November, we conducted the Detailed Screening Process of Flood Mitigation Alternatives and Strategies. Criteria included:

- Level of Protection Provided
- Project Cost
- Environmental Impacts
- Benefit Cost Analysis

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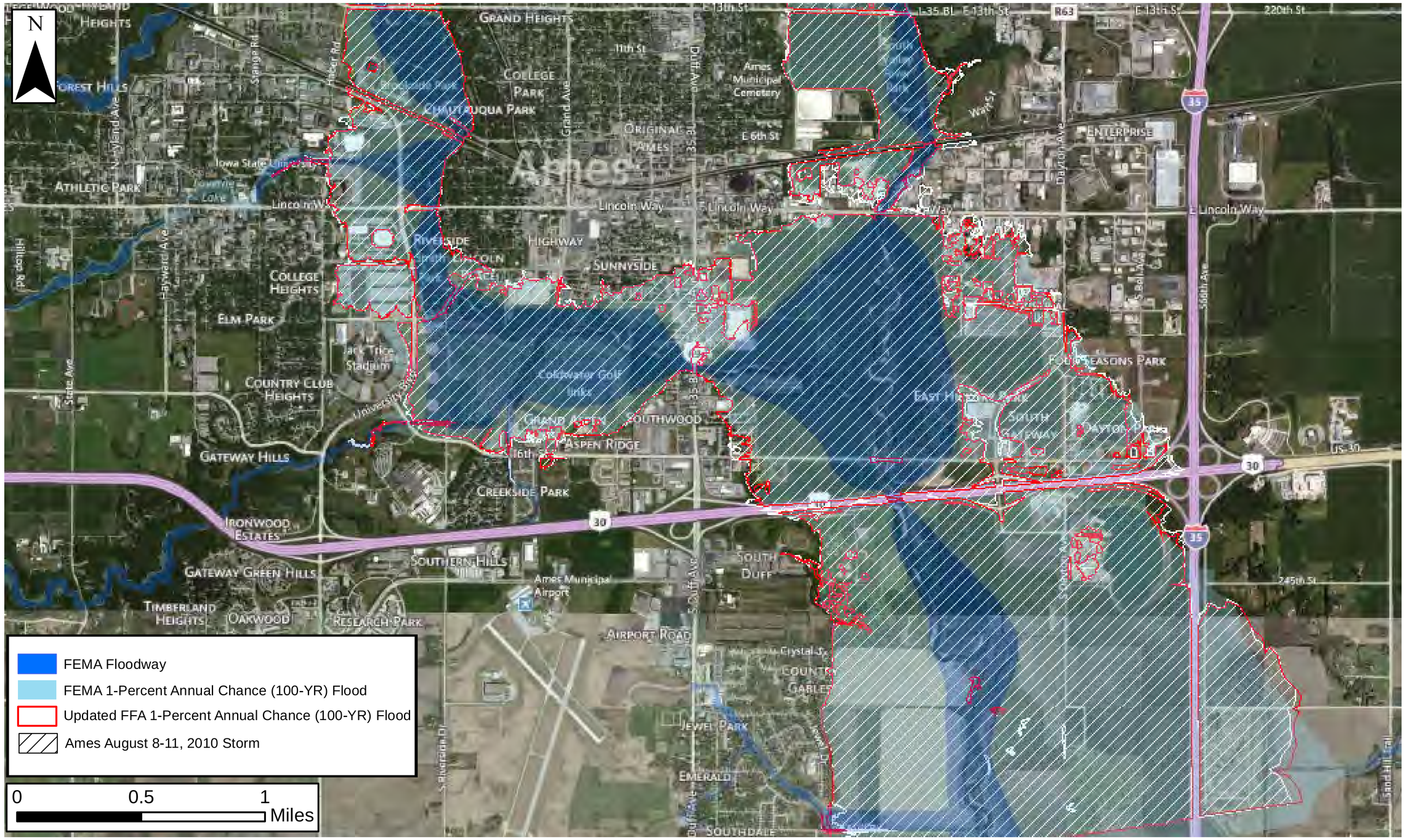
Flood Mitigation Study

1% Annual Chance FEMA Floodplain, 1% Annual Chance Updated FFA Floodplain and Ames August 8-11, 2010 Flood Extent



Confluence of Squaw Creek and Skunk River

* Approximate boundaries based on modeled inundation not actual inundation from the 2012 flood event

Evaluation Process

1 2 3 4 5

Transposed Rainstorms

- **Upper Iowa River, Iowa, June 7-8, 2008**
  10.5 inches in 30 hours
- **Ames, Iowa, August 8-11, 2010**
  10 inches
- **Lake Delhi, Iowa, Dam Failure Event, July 24, 2010**
  13 inches in 48 hours
- **Ames, Iowa, August 8-11, 2010**
  with Transposed 2nd Night of Rainfall
  20% more rainfall
- **Dubuque, Iowa (Galena, Illinois), July 27-28, 2011**
  11+ inches of rain in 13 hours, 0.1% annual chance rainfall (1,000 year rainfall)

Upper Iowa
(77,000 acre-ft of runoff)

Ames
(69,000 acre-ft of runoff)

Lake Delhi Storm
(120,000 acre-ft of runoff)

Ames - Transposed
(187,000 acre-ft of runoff)

Dubuque
(103,000 acre-ft of runoff)

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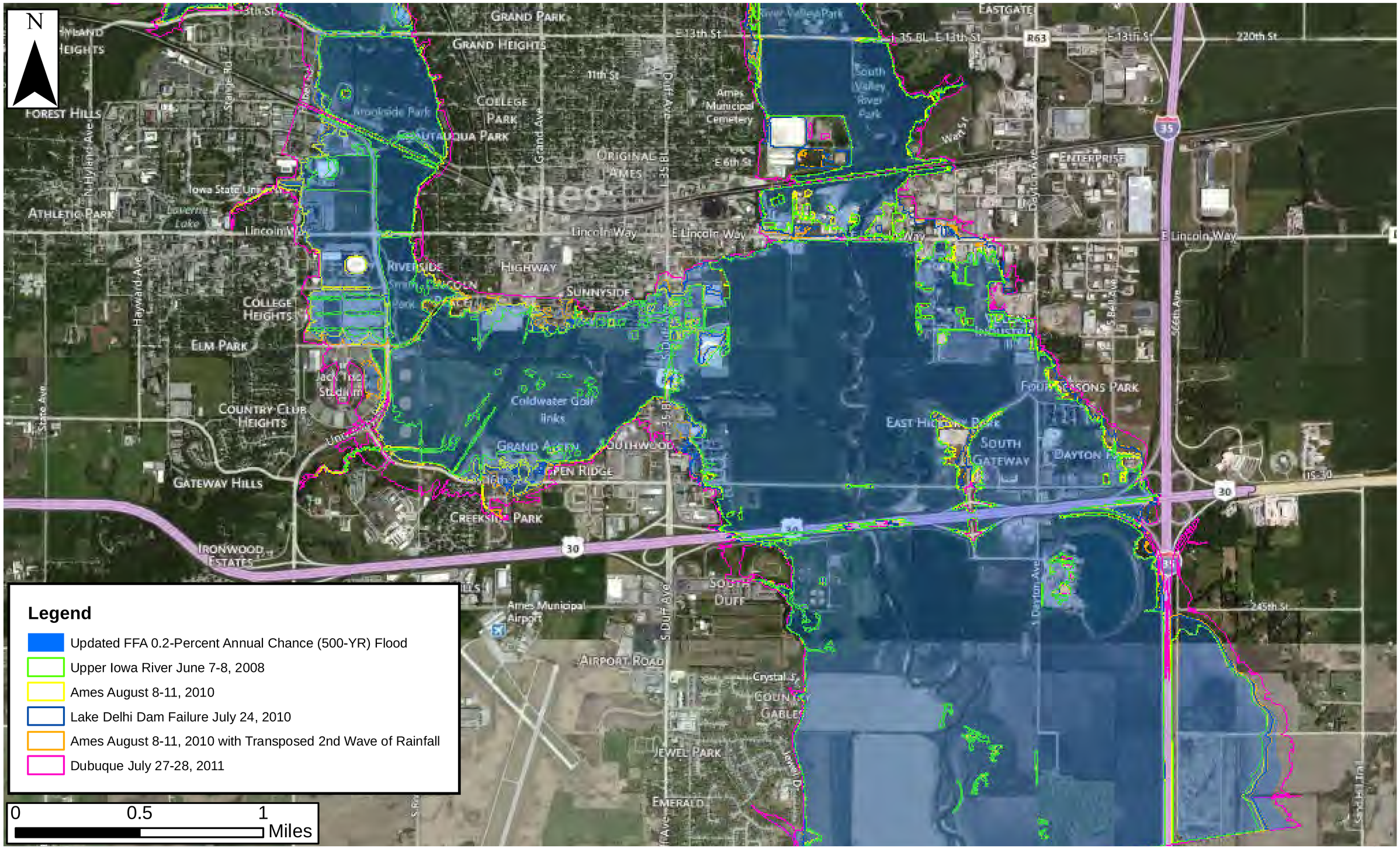
Flood Boundaries from Transposed Rainstorms



Confluence of Squaw Creek and Skunk River

* Approximate boundaries based on modeled inundation

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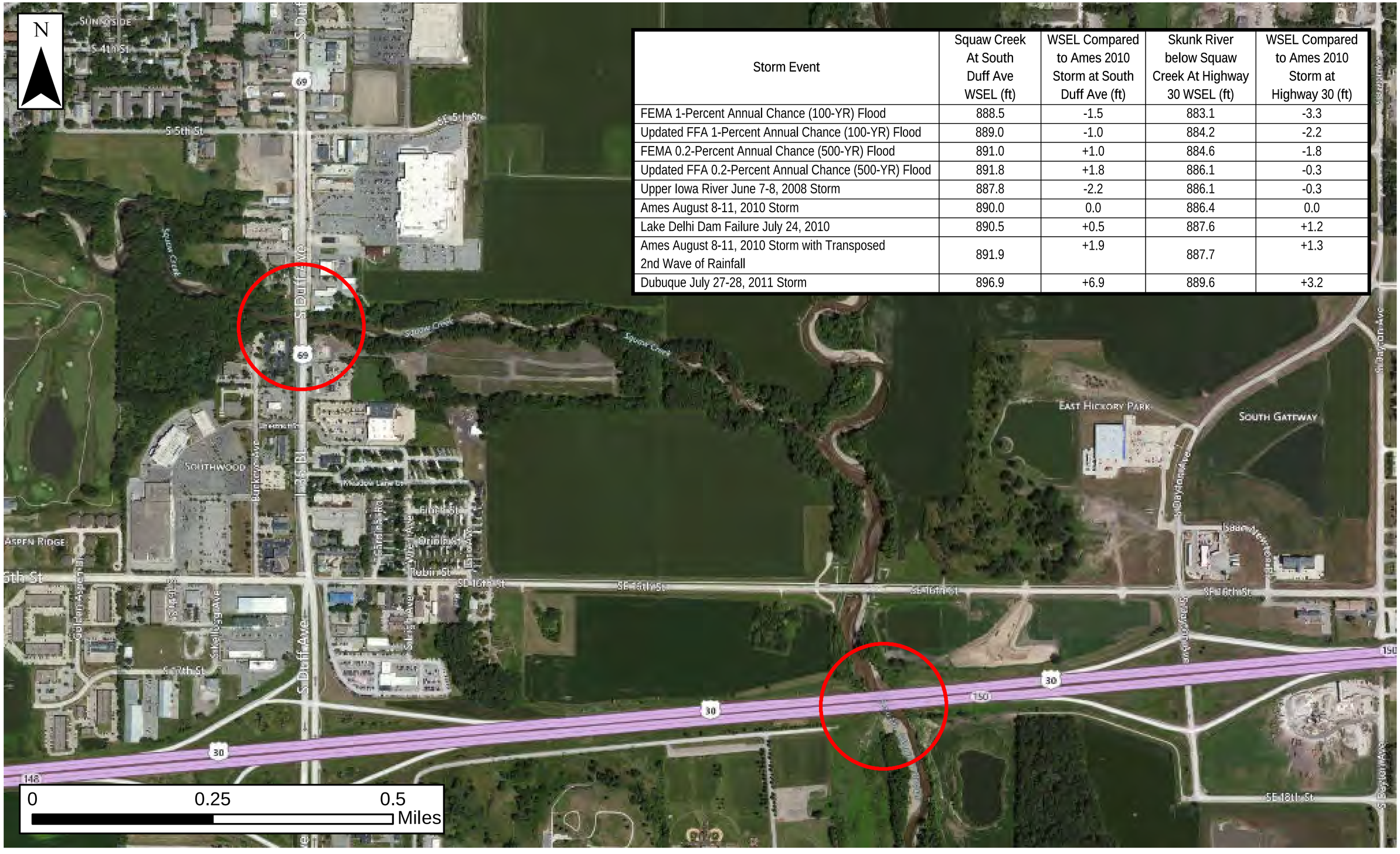
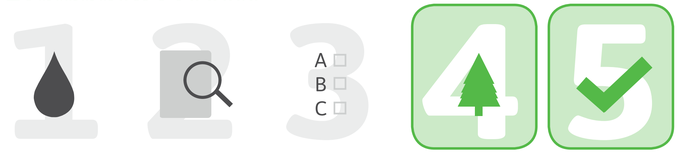
Flood Mitigation Study

Water Surface Elevation Comparison

Storm Event	Squaw Creek At South Duff Ave WSEL (ft)	WSEL Compared to Ames 2010 Storm at South Duff Ave (ft)	Skunk River below Squaw Creek At Highway 30 WSEL (ft)	WSEL Compared to Ames 2010 Storm at Highway 30 (ft)
FEMA 1-Percent Annual Chance (100-YR) Flood	888.5	-1.5	883.1	-3.3
Updated FFA 1-Percent Annual Chance (100-YR) Flood	889.0	-1.0	884.2	-2.2
FEMA 0.2-Percent Annual Chance (500-YR) Flood	891.0	+1.0	884.6	-1.8
Updated FFA 0.2-Percent Annual Chance (500-YR) Flood	891.8	+1.8	886.1	-0.3
Upper Iowa River June 7-8, 2008 Storm	887.8	-2.2	886.1	-0.3
Ames August 8-11, 2010 Storm	890.0	0.0	886.4	0.0
Lake Delhi Dam Failure July 24, 2010	890.5	+0.5	887.6	+1.2
Ames August 8-11, 2010 Storm with Transposed 2nd Wave of Rainfall	891.9	+1.9	887.7	+1.3
Dubuque July 27-28, 2011 Storm	896.9	+6.9	889.6	+3.2



Evaluation Process



Flood Mitigation Alternatives & Strategies

Storage

- Centralized Flood Storage
- Regional Flood Storage
- Floodplain Storage
- Conservation Measures in Watershed

Protection

- Flood Water Diversion
- Conveyance Improvements
- Levee along Skunk River
- Levee along Squaw Creek

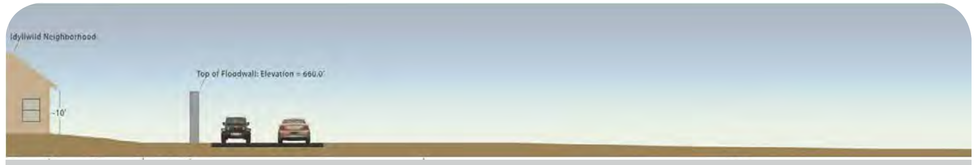
Non-Structural

- Do Nothing
- Property Buyouts
- Flood Plain Ordinance Modification

Evaluation Process

1 2 3 4 5

Flood Mitigation Alternatives & Strategies

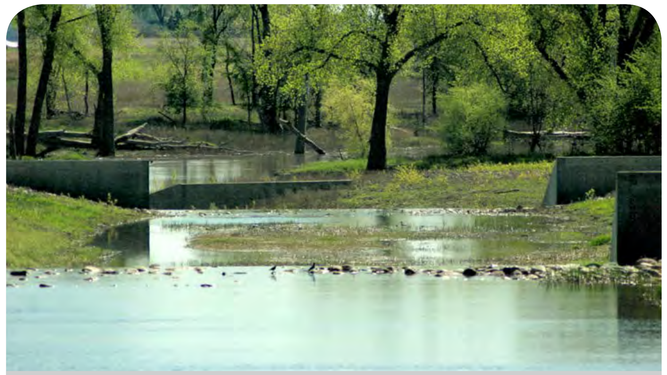


Floodwall

Levee with Roadway

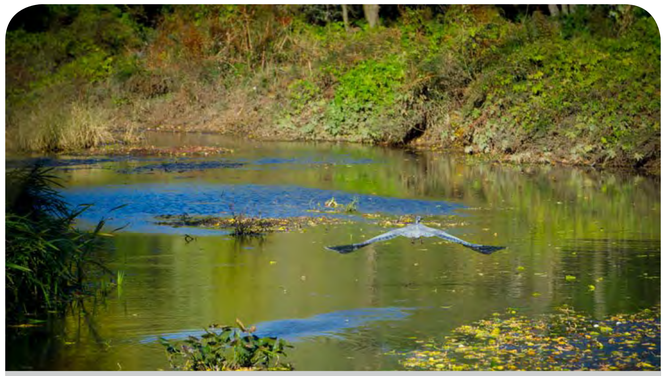
Floodwall

Levee with Roadway



Diversion

Dry Reservoir



Wetlands Restoration

Reservoir

Evaluation Process

Screening Criteria

The following criteria were used to evaluate flood mitigation alternatives and strategies.

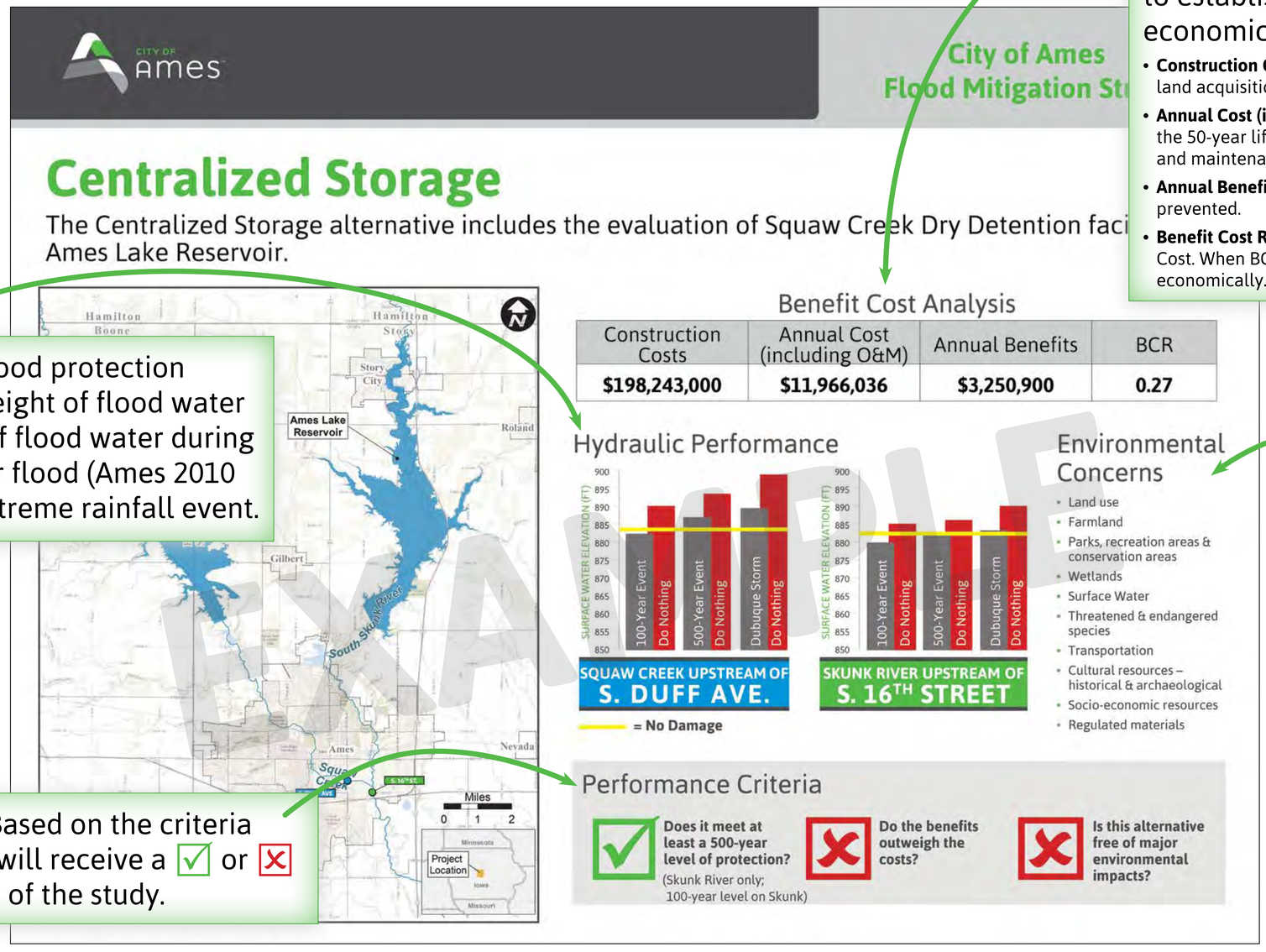
Benefit Cost Analysis – Estimates and totals the equivalent dollar value of the benefits and costs to the community to establish whether projects are economically worthwhile.

- **Construction Costs** – Final project cost including construction, land acquisition, and transportation relocations.
- **Annual Cost (including O&M)**– Annual cost of the project over the 50-year life of the project including capital costs, operation and maintenance costs.
- **Annual Benefits** – Annual dollar value of property damage prevented.
- **Benefit Cost Ratio (BCR)** – Annual Benefits divided by Annual Cost. When BCR is greater than 1, the project is justified economically.

Hydraulic Performance – Flood protection achieved by lowering the height of flood water and reducing the quantity of flood water during the 100-year flood, 500-year flood (Ames 2010 Flood), and the Dubuque extreme rainfall event.

Performance Criteria – Based on the criteria above, each alternative will receive a ☑ or ☒ if it meets the objectives of the study.

Environmental Concerns – Identifies the main environmental impacts of each alternative or strategy.



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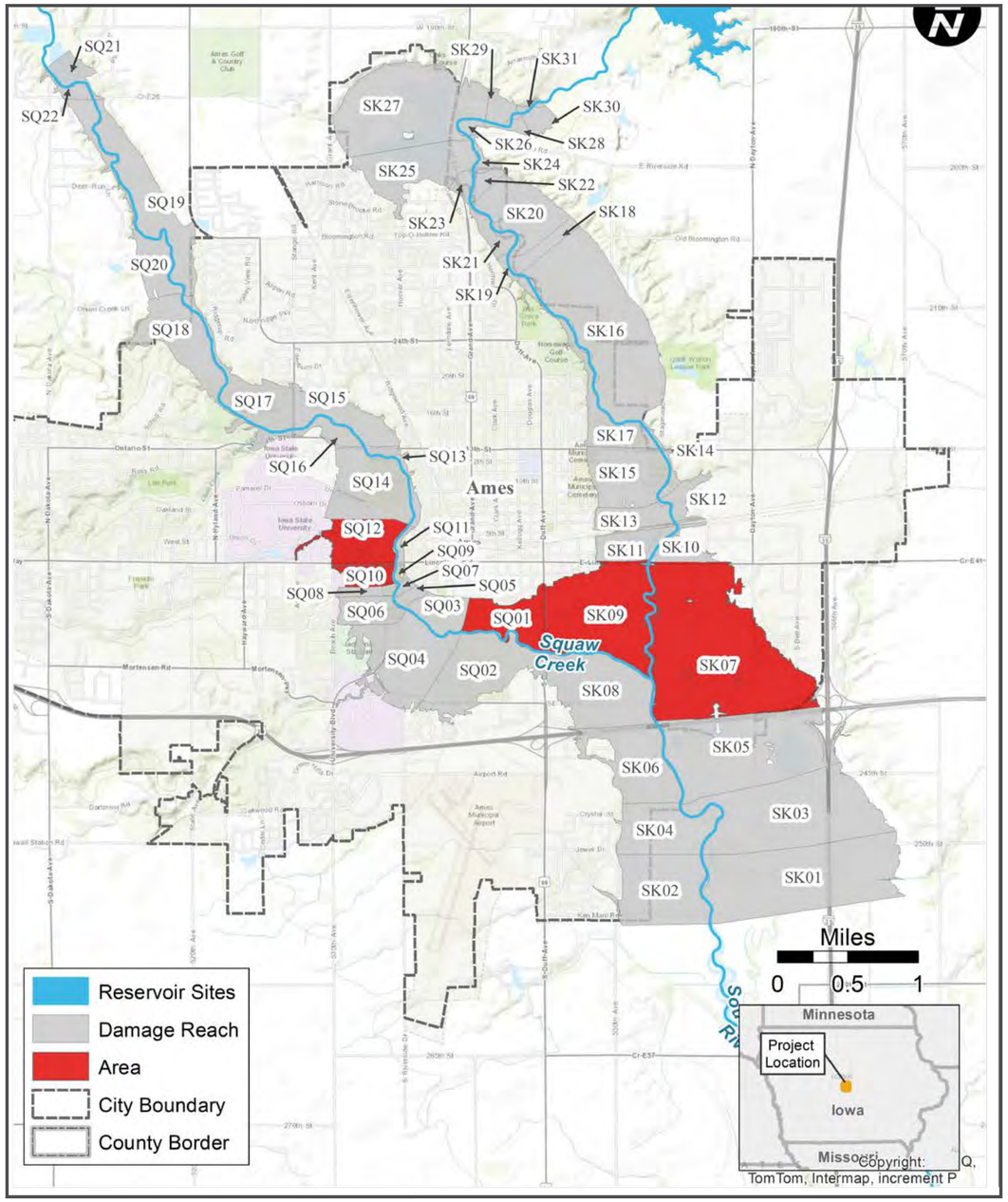
Flood Mitigation Study

Evaluation Process

1 2 3 4 5

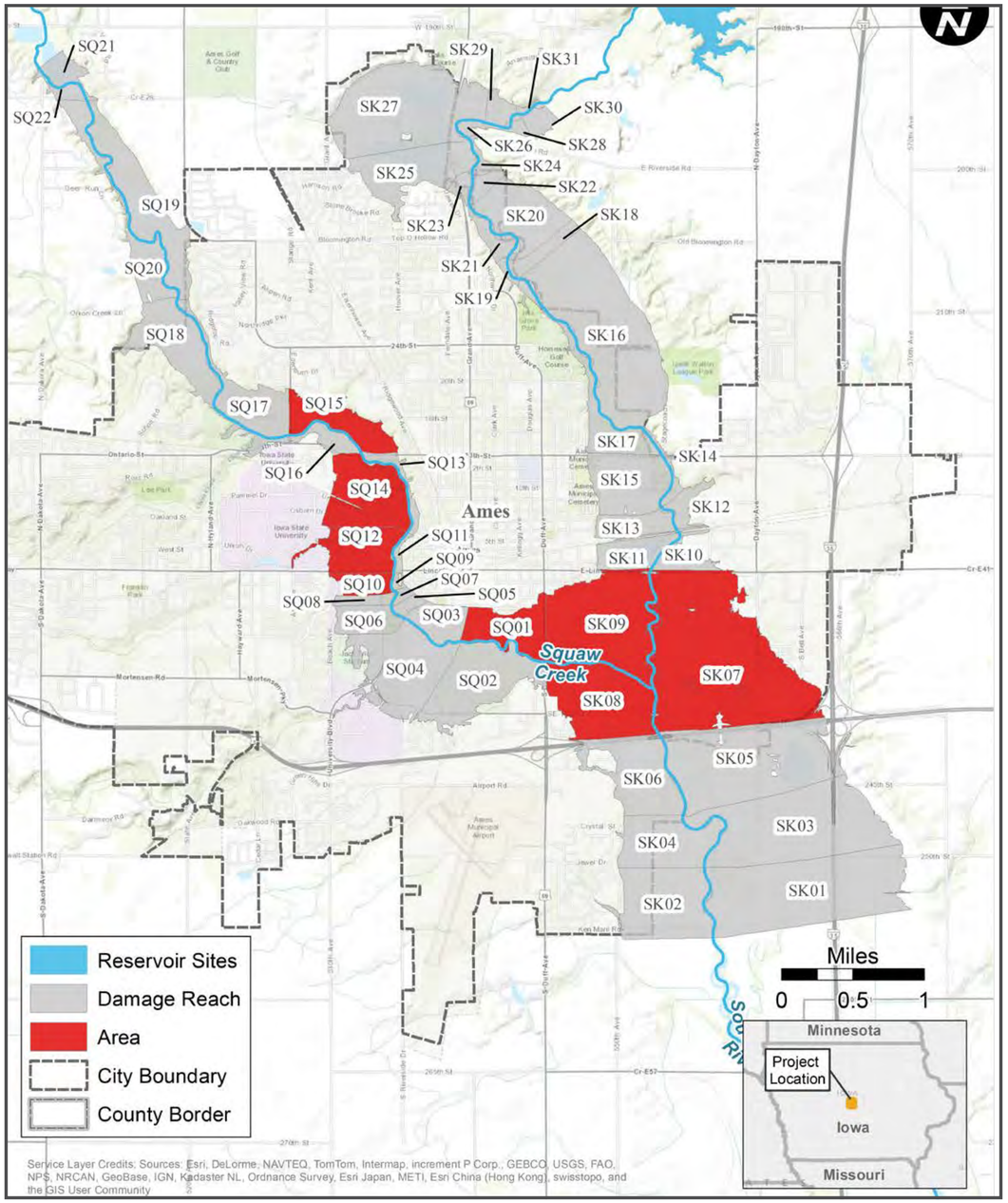
A
B
C

Flood Damage Areas
(Red = High $ Damage Area)



100-Year Flood Event

40% of total Structures and 99% of total Property Value

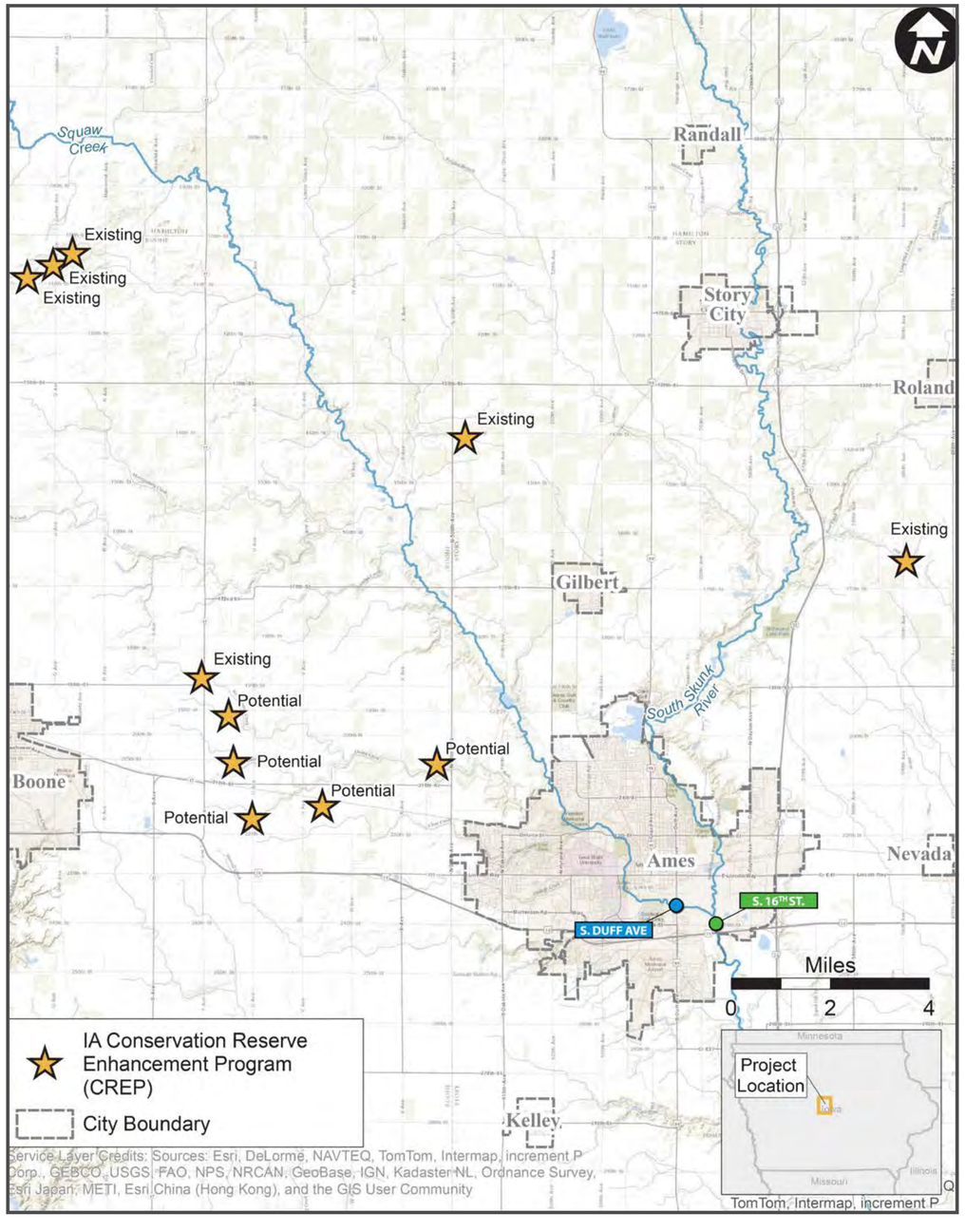


500-Year Flood Event

60% of total Structures and 99% of total Property Value

Conservation Measures in Watershed

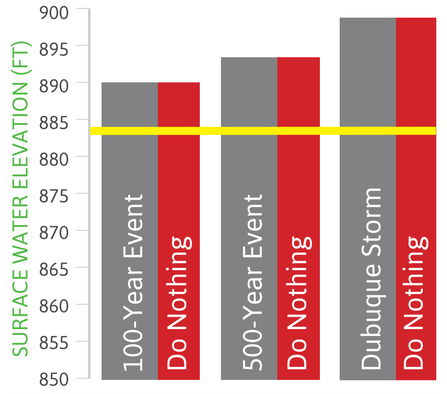
The Conservation Measures in the Watershed alternative evaluates small detention sites that could contribute to flood reduction, and the construction of wetlands administered under the Iowa Department of Agriculture and Land Stewardship Conservation Reserve Enhancement Program.



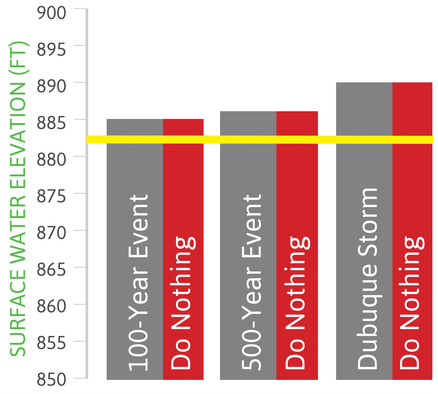
Benefit Cost Analysis

Construction Costs	Annual Cost (including O&M)	Annual Benefits	BCR
$2,025,000	**$122,230**	**$0**	**0.00**

Hydraulic Performance



SQUAW CREEK UPSTREAM OF S. DUFF AVE.



SKUNK RIVER UPSTREAM OF S. 16TH STREET

= No Damage

Environmental Concerns

- Land use
- Farmland

Performance Criteria

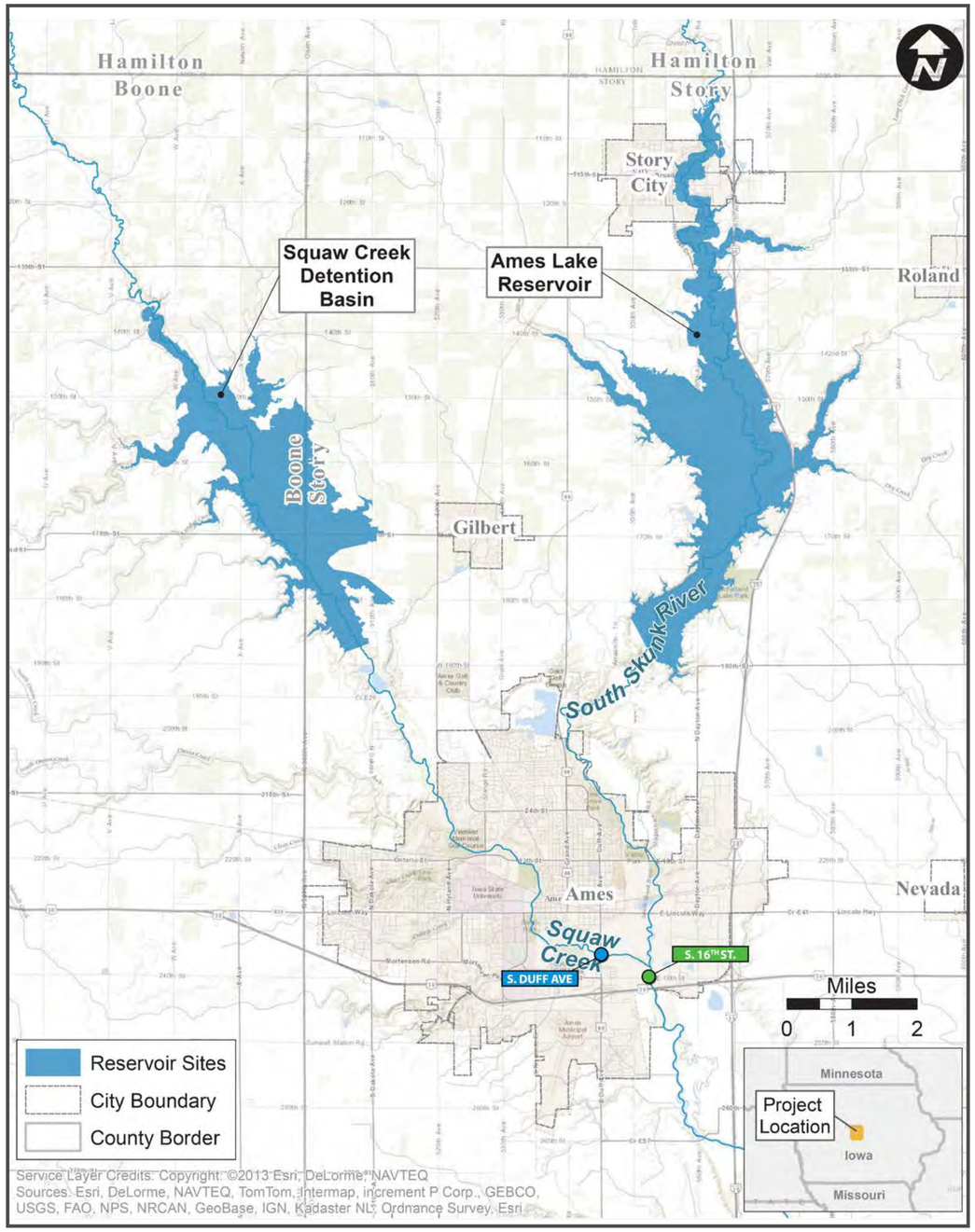
Does it meet at least a 500-year level of protection?
(Provide no flood level of reduction)

Do the benefits outweigh the costs?

Is this alternative free of major environmental impacts?

Centralized Storage

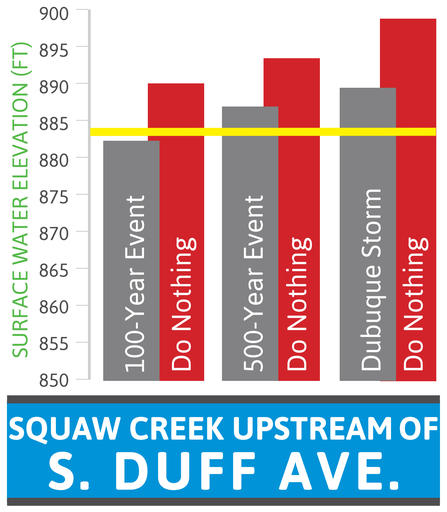
The Centralized Storage alternative includes the evaluation of Squaw Creek Dry Detention facility and Ames Lake Reservoir.



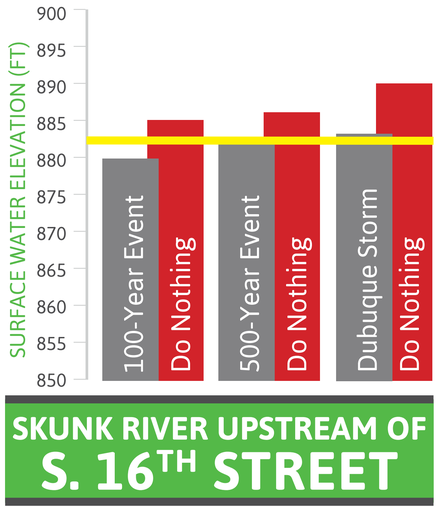
Benefit Cost Analysis

Construction Costs	Annual Cost (including O&M)	Annual Benefits	BCR
$198,243,000	**$11,966,036**	**$3,250,900**	**0.27**

Hydraulic Performance



SQUAW CREEK UPSTREAM OF S. DUFF AVE.



SKUNK RIVER UPSTREAM OF S. 16TH STREET

= No Damage

Environmental Concerns

- Land use
- Farmland
- Parks, recreation areas & conservation areas
- Wetlands
- Surface Water
- Threatened & endangered species
- Transportation
- Cultural resources – historical & archaeological
- Socio-economic resources
- Regulated materials

Performance Criteria

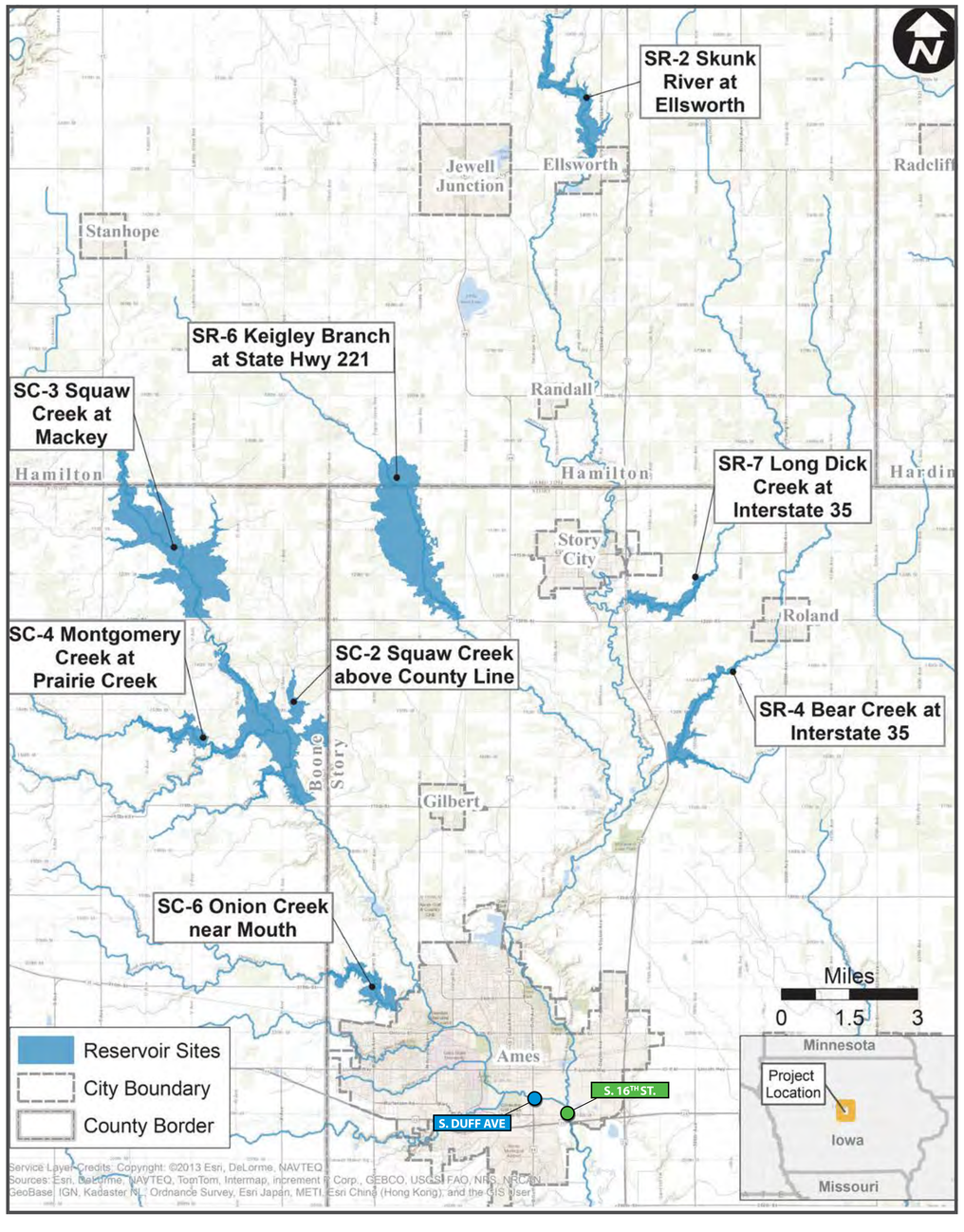
Does it meet at least a 500-year level of protection?
(Skunk River only; 100-year level on Squaw)

Do the benefits outweigh the costs?

Is this alternative free of major environmental impacts?

Regional Flood Storage

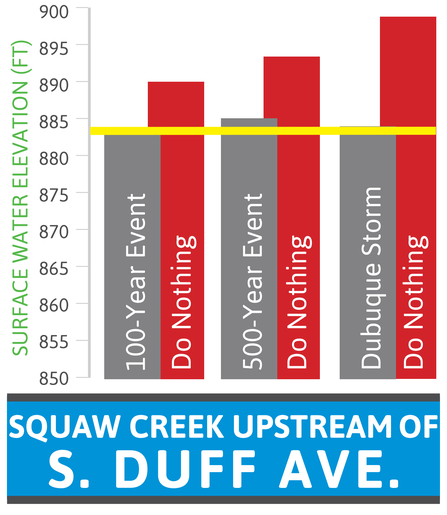
The Regional Flood Storage alternative includes the evaluation of 14 storage sites.



Benefit Cost Analysis

Construction Costs	Annual Cost (including O&M)	Annual Benefits	BCR
$145,339,000	**$8,772,727**	**$3,217,700**	**0.37**

Hydraulic Performance



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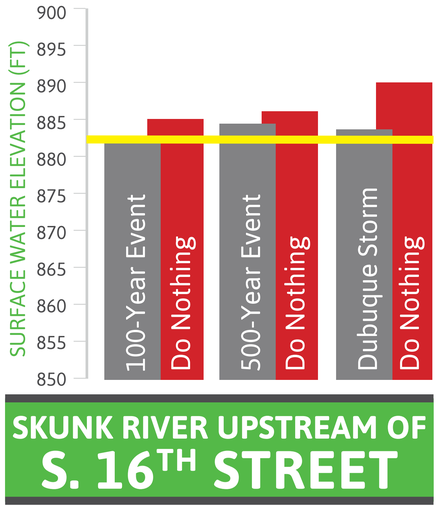


SKUNK RIVER UPSTREAM OF S. 16TH STREET

= No Damage

Environmental Concerns

- Land use
- Farmland
- Parks, recreation areas & conservation areas
- Wetlands
- Surface Water
- Threatened & endangered species
- Transportation
- Cultural resources – historical & archaeological
- Socio-economic resources
- Regulated materials

Performance Criteria

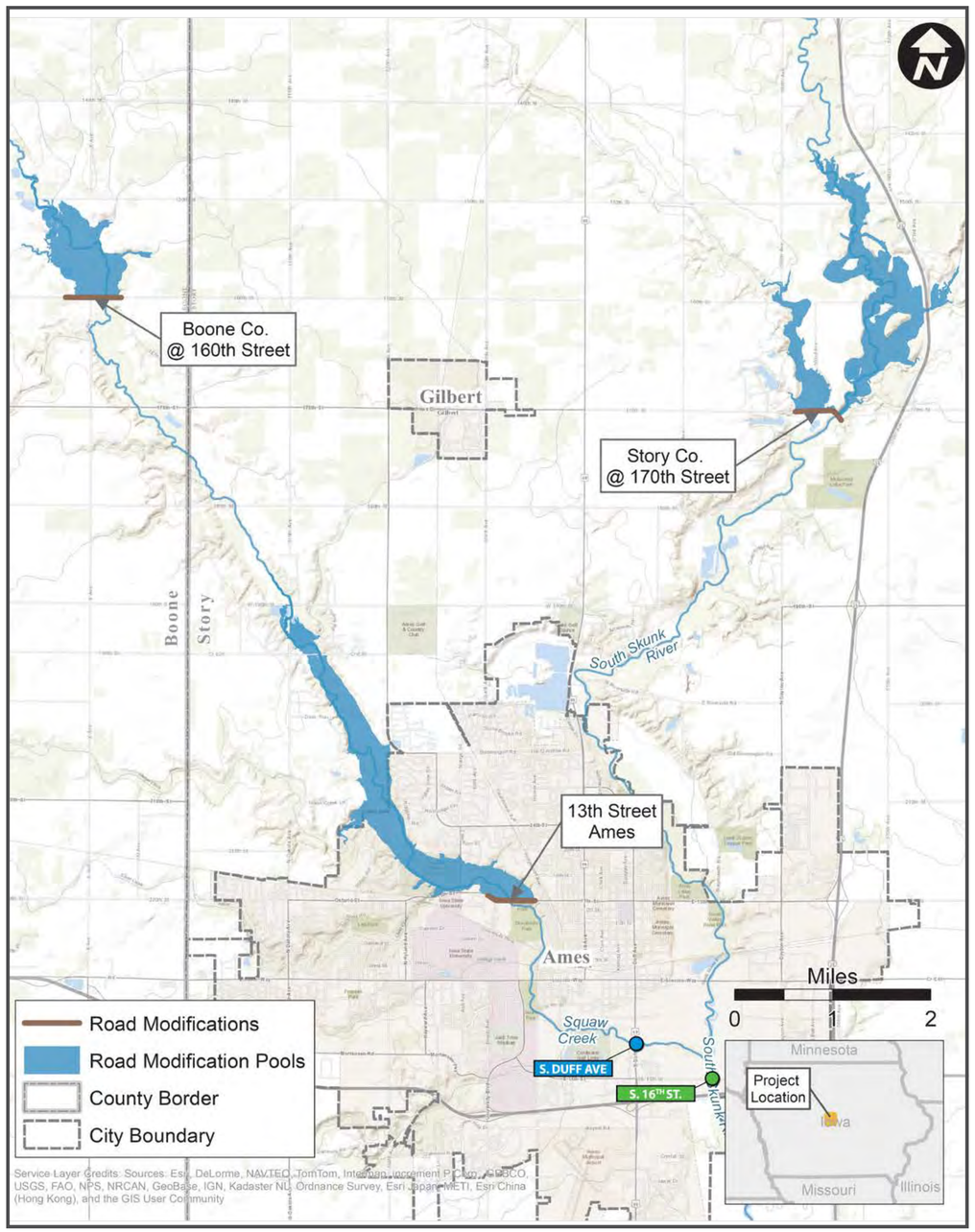
Does it meet at least a 500-year level of protection?
(100-year level on Squaw; 100-year level on Skunk)

Do the benefits outweigh the costs?

Is this alternative free of major environmental impacts?

Floodplain Storage

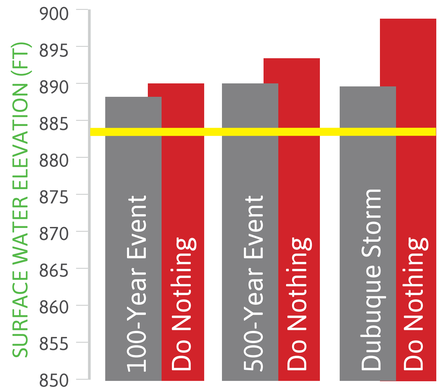
The Floodplain Storage alternative achieves additional floodplain storage by raising 3 roads by 5 feet, and modifying 3 bridges/culverts.



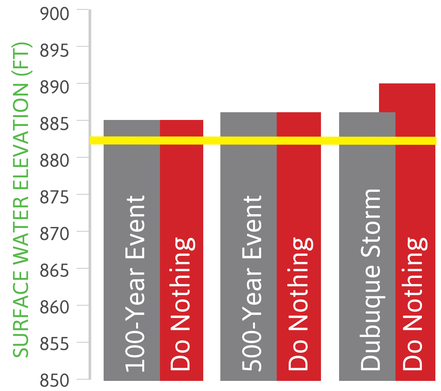
Benefit Cost Analysis

Construction Costs	Annual Cost (including O&M)	Annual Benefits	BCR
$41,000,000	**$2,474,778**	**$2,786,900**	**1.13**

Hydraulic Performance



SQUAW CREEK UPSTREAM OF S. DUFF AVE.



SKUNK RIVER UPSTREAM OF S. 16TH STREET

= No Damage

Environmental Concerns

- Land use
- Farmland
- Parks, recreation areas & conservation areas
- Wetlands
- Surface Water
- Threatened & endangered species
- Transportation
- Cultural resources – historical & archaeological
- Socio-economic resources
- Regulated materials
- Environmental justice

Performance Criteria

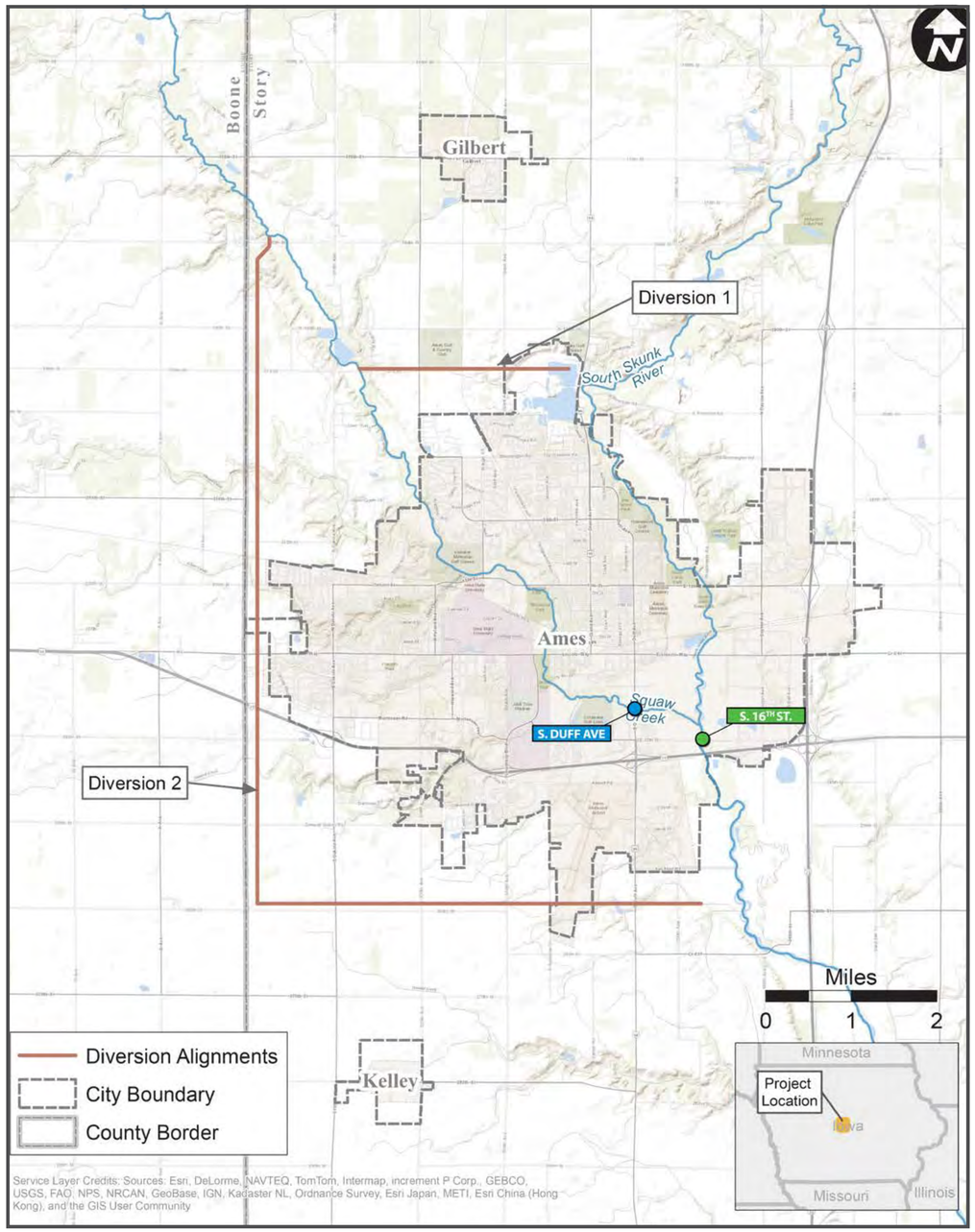
Does it meet at least a 500-year level of protection?
(Reduced 100-year flood height of 2-ft. on Squaw)

Do the benefits outweigh the costs?

Is this alternative free of major environmental impacts?

Diversion 1

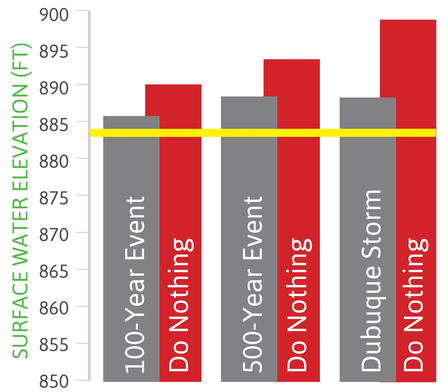
The Diversion 1 alternative includes diverting flood waters around Ames by diverting Squaw Creek at Cameron School Road to the Skunk River via the Ada Hayden Reservoir.



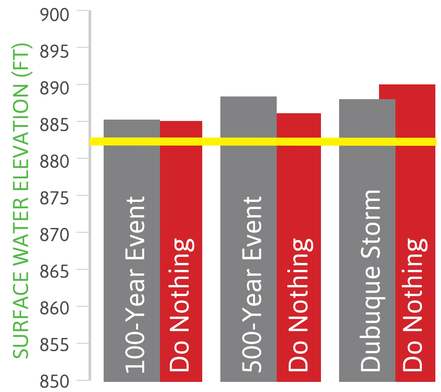
Benefit Cost Analysis

Construction Costs	Annual Cost (including O&M)	Annual Benefits	BCR
$49,243,000	**$2,972,329**	**$3,042,700**	**1.02**

Hydraulic Performance



SQUAW CREEK UPSTREAM OF S. DUFF AVE.



SKUNK RIVER UPSTREAM OF S. 16TH STREET

= No Damage

Environmental Concerns

- Land use
- Farmland
- Parks, recreation areas & conservation areas
- Wetlands
- Threatened & endangered species
- Transportation
- Cultural resources – historical & archaeological
- Socio-economic resources
- Regulated materials
- Environmental justice

Performance Criteria

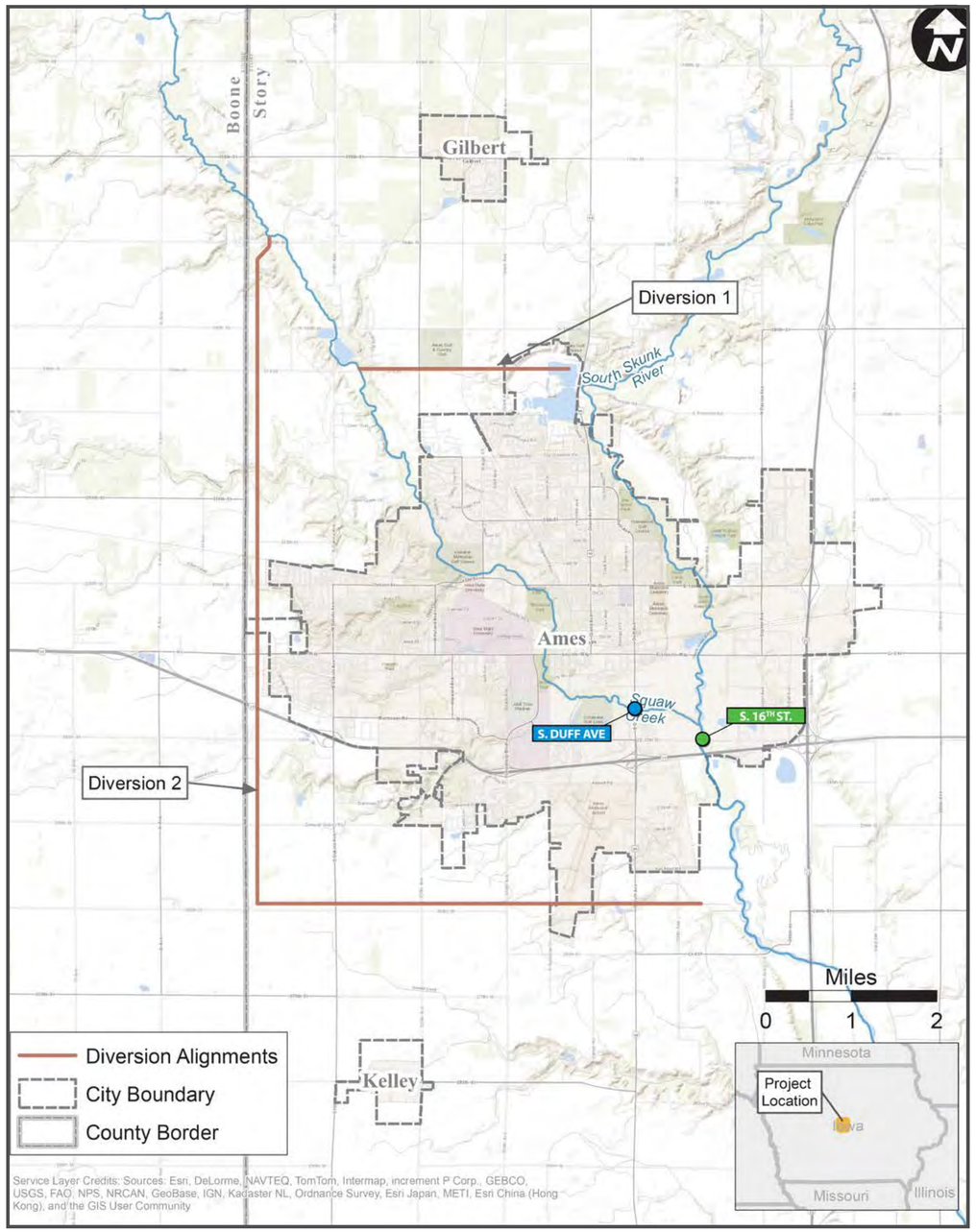
Does it meet at least a 500-year level of protection?
(Reduced 100-year flood height of 5-ft on Squaw)

Do the benefits outweigh the costs?

Is this alternative free of major environmental impacts?

Diversion 2

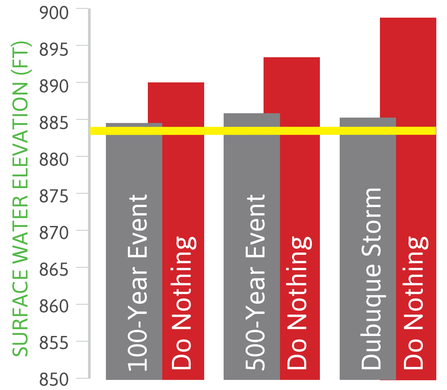
The Diversion 2 alternative includes diverting flood waters around Ames by diverting Squaw Creek upstream from Cameron School Road, to the Skunk River downstream from the Ames Municipal Airport.



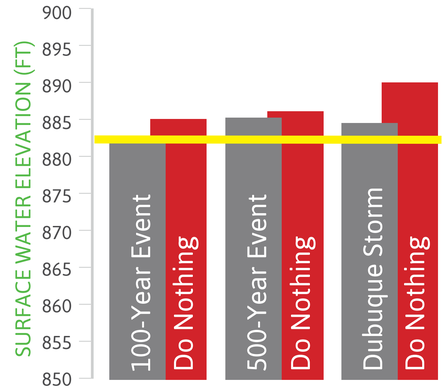
Benefit Cost Analysis

Construction Costs	Annual Cost (including O&M)	Annual Benefits	BCR
$1,095,000,000	**$66,094,687**	**$3,192,300**	**0.05**

Hydraulic Performance



SQUAW CREEK UPSTREAM OF S. DUFF AVE.



SKUNK RIVER UPSTREAM OF S. 16TH STREET

= No Damage

Environmental Concerns

- Land use
- Farmland
- Parks, recreation areas & conservation areas
- Wetlands
- Threatened & endangered species
- Transportation
- Cultural resources – historical & archaeological
- Socio-economic resources
- Regulated materials
- Environmental justice

Performance Criteria

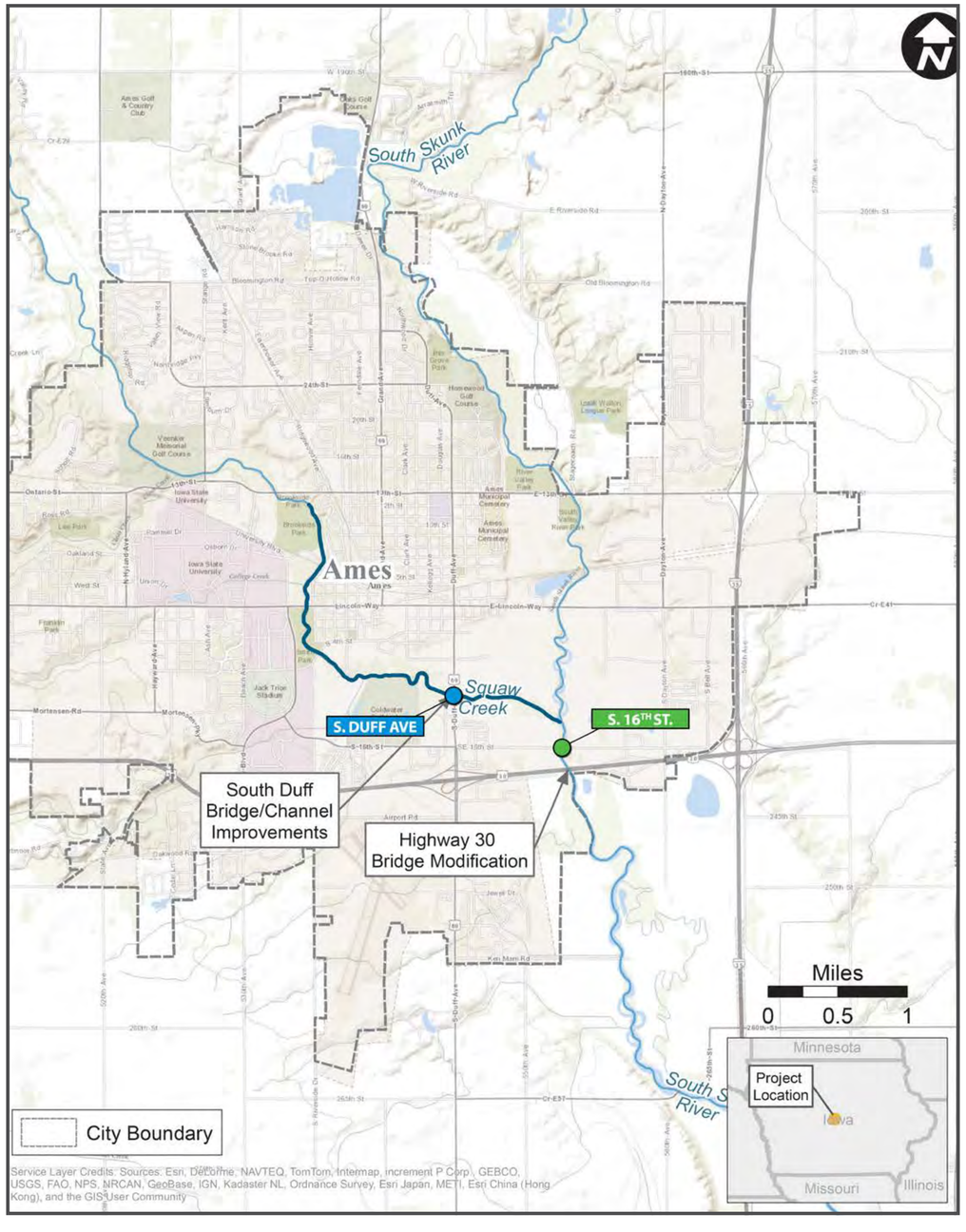
Does it meet at least a 500-year level of protection?
(Reduced 100-year flood height of 5-ft on Squaw; 100-year protection on Skunk)

Do the benefits outweigh the costs?

Is this alternative free of major environmental impacts?

Conveyance Improvements (Clear Channel)

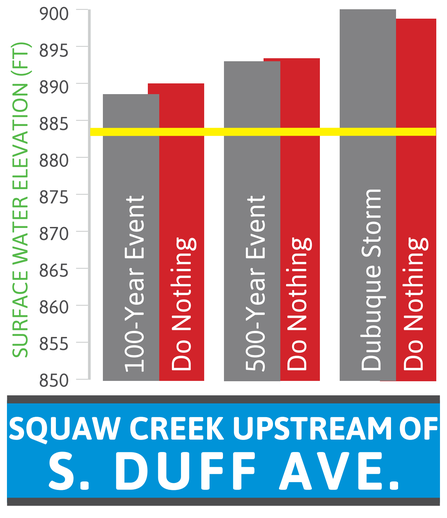
The Conveyance Improvements alternative involves the clearing or excavating of river channel improvements and/or the removal of bridge obstructions.



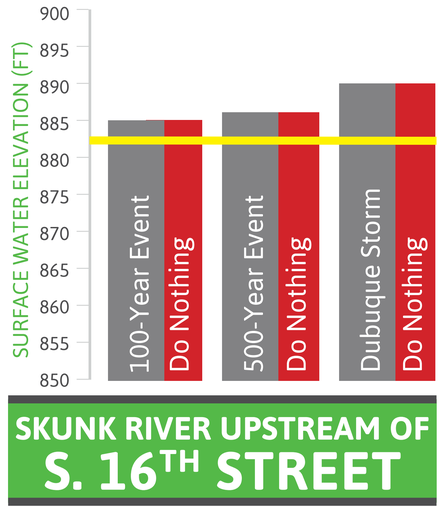
Benefit Cost Analysis

Construction Costs	Annual Cost (including O&M)	Annual Benefits	BCR
$2,943,000	**$177,641**	**$2,436,700**	**13.72**

Hydraulic Performance



SQUAW CREEK UPSTREAM OF S. DUFF AVE.



SKUNK RIVER UPSTREAM OF S. 16TH STREET

= No Damage

Environmental Concerns

- Land use
- Farmland
- Surface water
- Threatened & endangered species
- Transportation
- Cultural resources – historical & archaeological
- Socio-economic resources
- Regulated materials

Performance Criteria

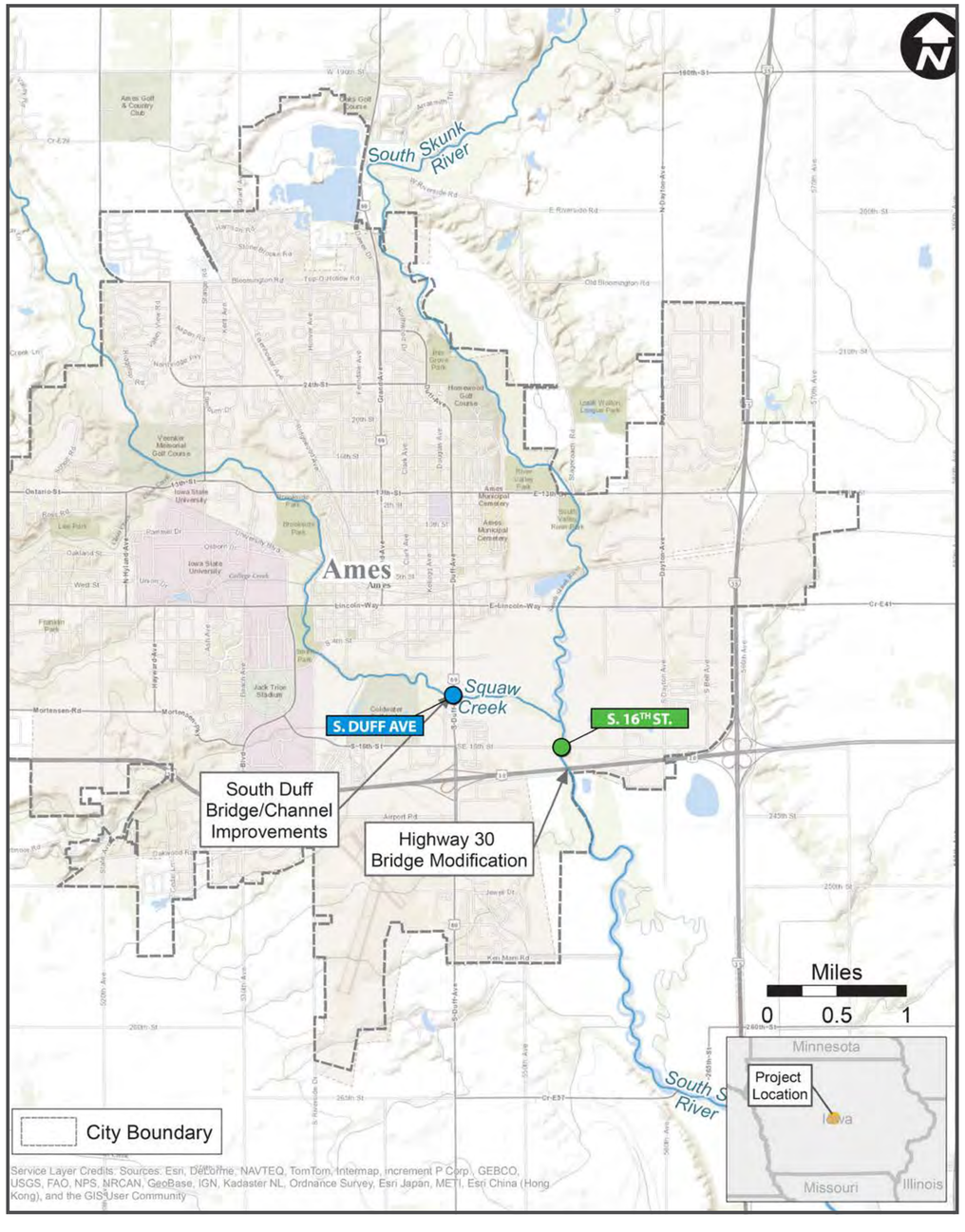
Does it meet at least a 500-year level of protection?
(Reduced 100-year flood height of 1-ft. on Squaw)

Do the benefits outweigh the costs?

Is this alternative free of major environmental impacts?

Conveyance Improvements (US Hwy 30 Bridge Improvement)

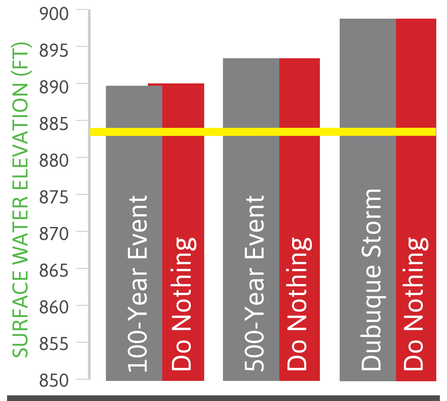
The Conveyance Improvements alternative involves the clearing or excavating of river channel improvements and/or the removal of bridge obstructions.



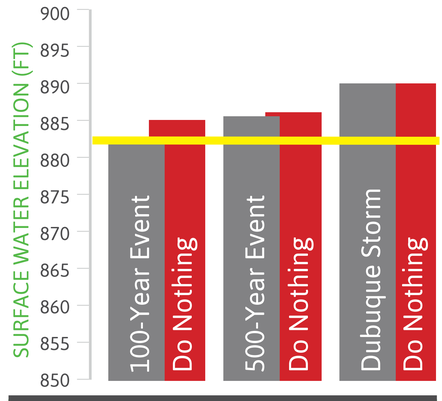
Benefit Cost Analysis

Construction Costs	Annual Cost (including O&M)	Annual Benefits	BCR
$7,740,000	**$467,190**	**$2,097,300**	**4.49**

Hydraulic Performance



SQUAW CREEK UPSTREAM OF S. DUFF AVE.



SKUNK RIVER UPSTREAM OF S. 16TH STREET

= No Damage

Environmental Concerns

- Land use
- Farmland
- Surface water
- Threatened & endangered species
- Transportation
- Cultural resources – historical & archaeological
- Socio-economic resources
- Regulated materials

Performance Criteria

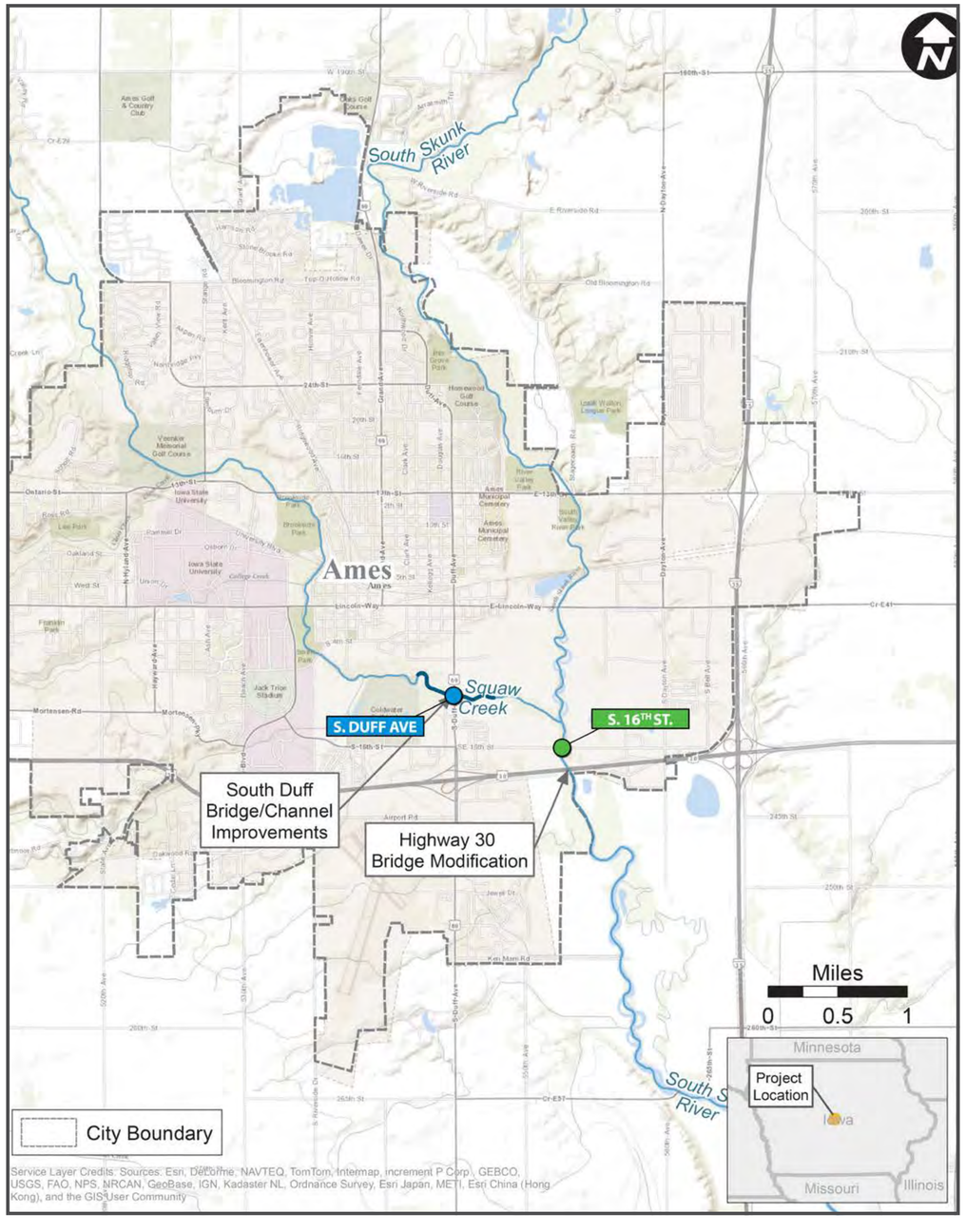
Does it meet at least a 500-year level of protection?
(Reduced 100-year flood height of 2.5-ft. on Skunk)

Do the benefits outweigh the costs?

Is this alternative free of major environmental impacts?

Conveyance Improvements (South Duff Bridge Improvement & Clear Channel)

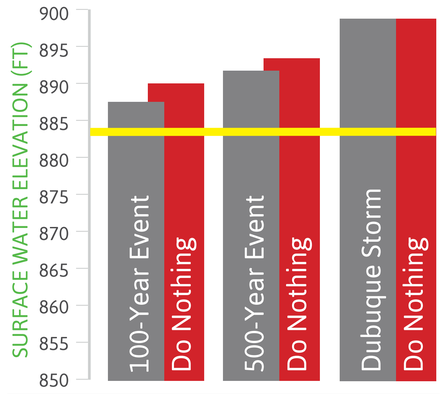
The Conveyance Improvements alternative involves the clearing or excavating of river channel improvements and/or the removal of bridge obstructions.



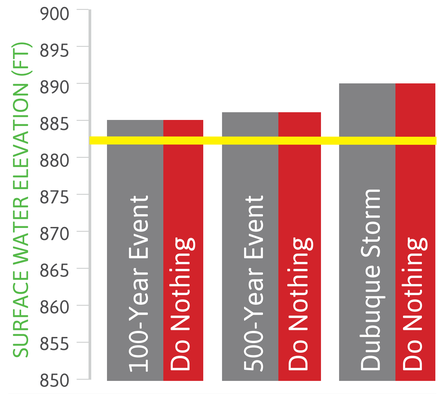
Benefit Cost Analysis

Construction Costs	Annual Cost (including O&M)	Annual Benefits	BCR
$4,715,000	**$284,599**	**$2,086,900**	**7.33**

Hydraulic Performance



SQUAW CREEK UPSTREAM OF S. DUFF AVE.



SKUNK RIVER UPSTREAM OF S. 16TH STREET

= No Damage

Environmental Concerns

- Land use
- Farmland
- Surface water
- Threatened & endangered species
- Transportation
- Cultural resources – historical & archaeological
- Socio-economic resources
- Regulated materials

Performance Criteria

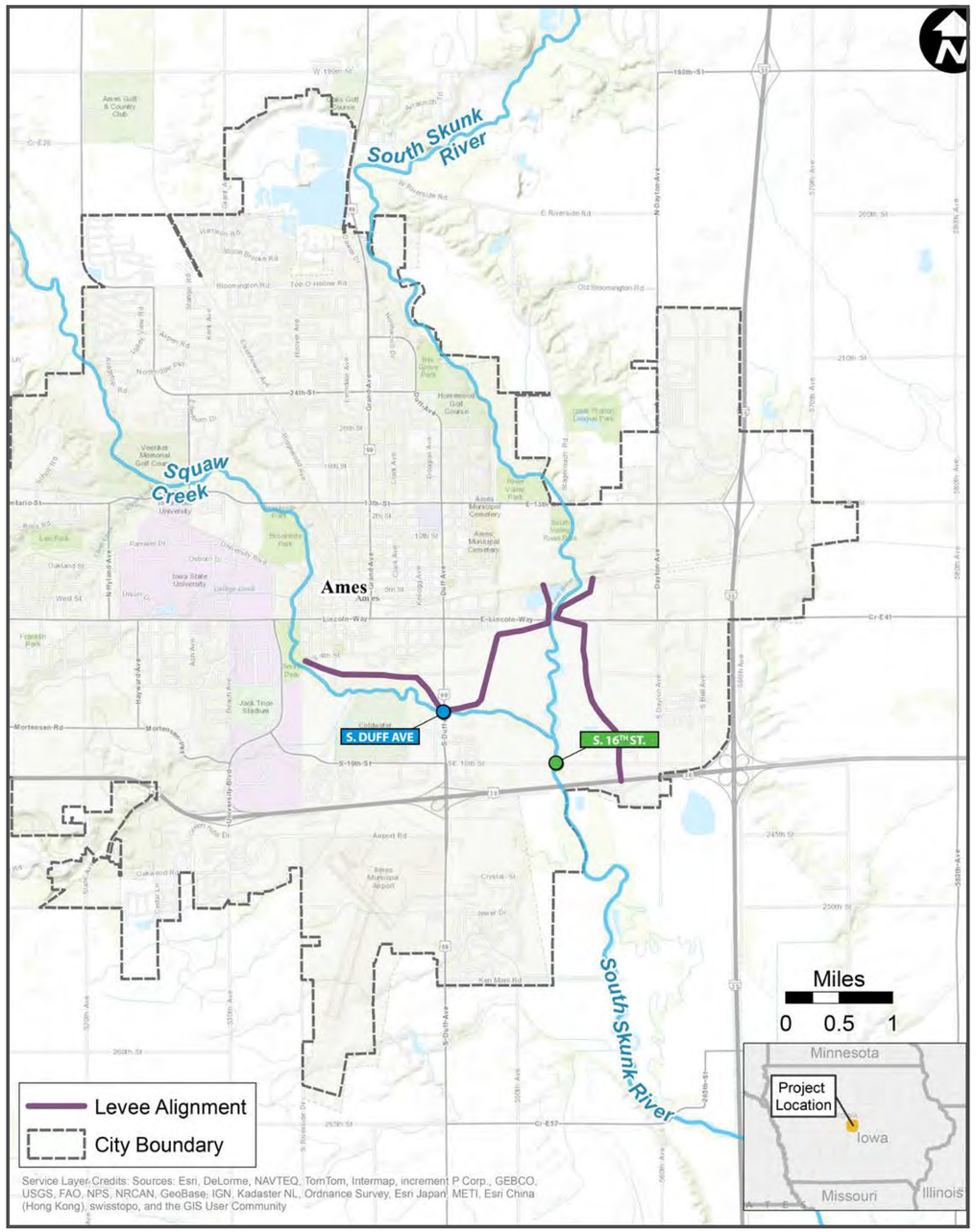
Does it meet at least a 500-year level of protection?
(Reduced 100-year flood height of 2-ft on Squaw)

Do the benefits outweigh the costs?

Is this alternative free of major environmental impacts?

Levee Protection to 100-Year

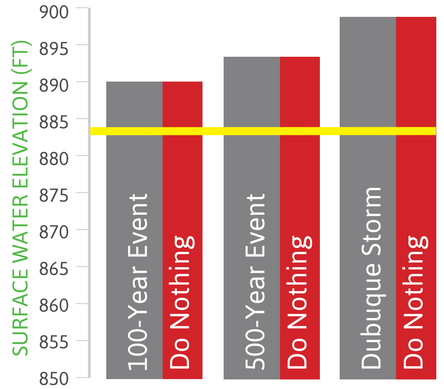
The Levees alternatives evaluates protection to the 100-year flood level protecting property areas along Skunk River and Squaw Creek by constructing a levee (berm/floodwall) combination.



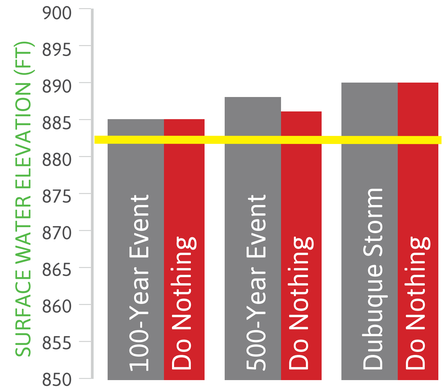
Benefit Cost Analysis

Construction Costs	Annual Cost (including O&M)	Annual Benefits	BCR
Skunk River $4,818,000	**Skunk River $290,817**	**Skunk River $121,400**	**Skunk River 0.42**
Squaw Creek $6,079,000	**Squaw Creek $366,931**	**Squaw Creek $174,600**	**Squaw Creek 0.48**

Hydraulic Performance



SQUAW CREEK UPSTREAM OF S. DUFF AVE.



SKUNK RIVER UPSTREAM OF S. 16TH STREET

= No Damage

Environmental Concerns

- Land use
- Threatened & endangered species
- Transportation
- Cultural resources – historical & archaeological
- Socio-economic resources
- Regulated materials
- Environmental justice

Performance Criteria

Does Skunk River meet at least a 500-year level of protection?
(The alternative meets the 100-year protection on both Squaw and Skunk)

Do the benefits outweigh the costs?

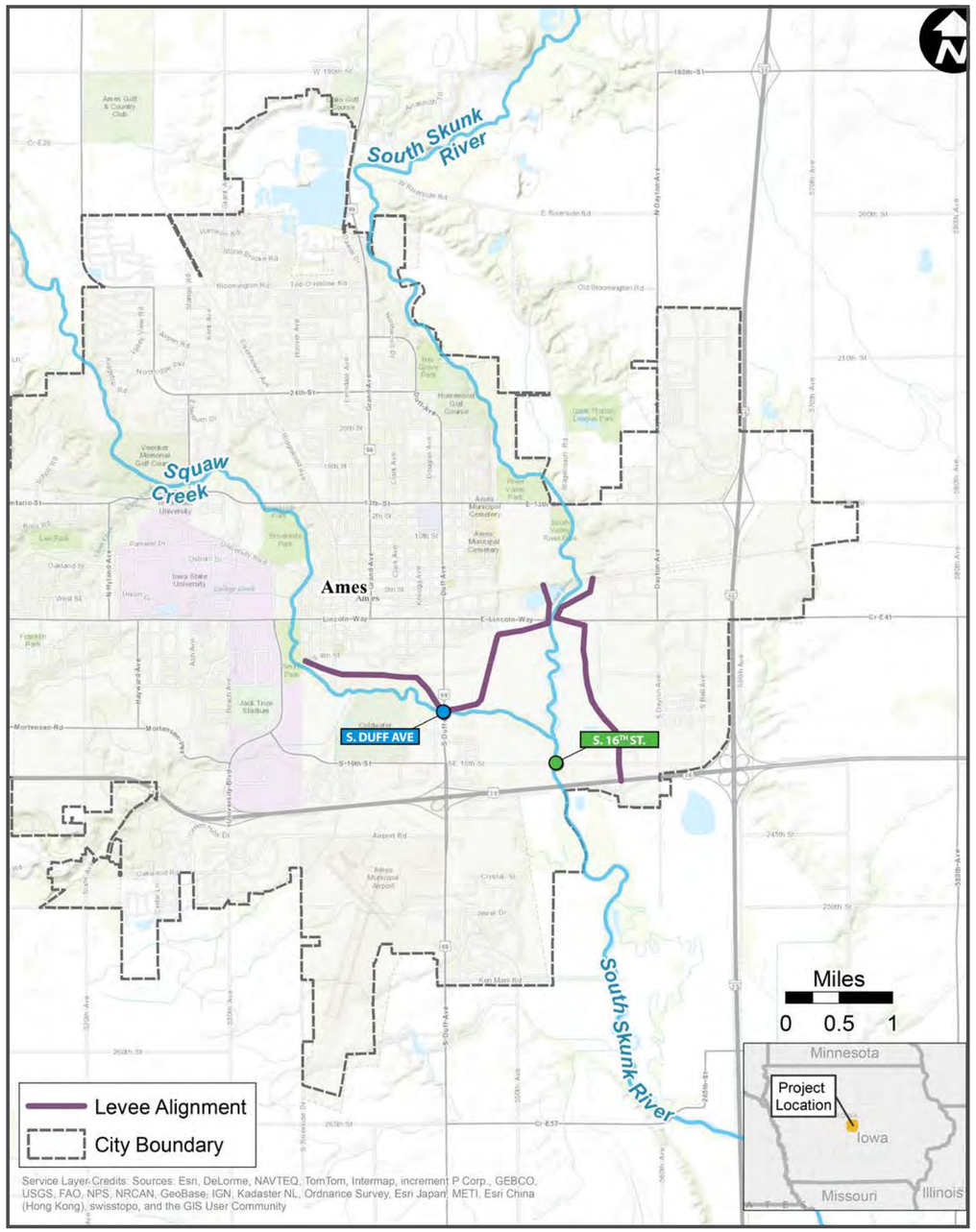
Is this alternative free of major environmental impacts?

CITY OF ames

City of Ames
Flood Mitigation Study

Levee Protection to 500-Year

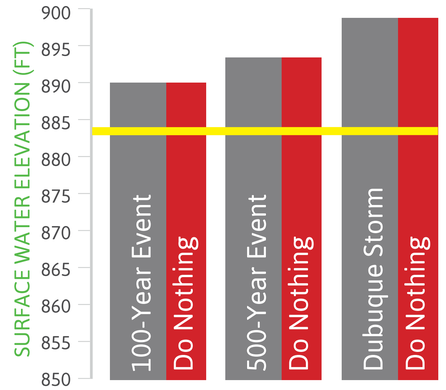
The Levees alternatives evaluates protection to the 500-year flood level protecting property areas along Skunk River and Squaw Creek by constructing a levee (berm/floodwall) combination.



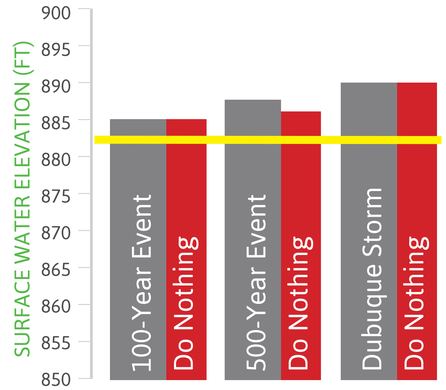
Benefit Cost Analysis

Construction Costs	Annual Cost (including O&M)	Annual Benefits	BCR
Skunk River $5,333,000	**Skunk River $321,902**	**Skunk River $198,100**	**Skunk River 0.62**
Squaw Creek $7,668,000	**Squaw Creek $462,844**	**Squaw Creek $174,600**	**Squaw Creek 0.38**

Hydraulic Performance



SQUAW CREEK UPSTREAM OF S. DUFF AVE.



SKUNK RIVER UPSTREAM OF S. 16TH STREET

= No Damage

Environmental Concerns

- Land use
- Threatened & endangered species
- Transportation
- Cultural resources – historical & archaeological
- Socio-economic resources
- Regulated materials
- Environmental justice

Performance Criteria

Does it meet at least a 500-year level of protection?

Do the benefits outweigh the costs?

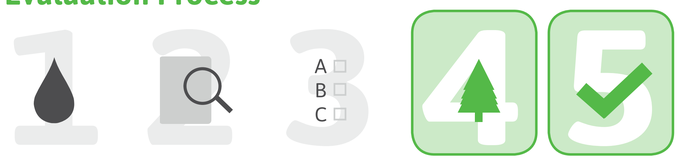
Is this alternative free of major environmental impacts?

Environmental Concerns

Environmental Concerns	Alternatives / Strategies						
	Conservation Measures in the Watershed	Centralized Flood Storage	Regional Flood Storage	Floodplain Storage	Diversion	Conveyance Improvements	Levees along Skunk River and Squaw Creek
Land Use	Impacts to Agricultural land. (1,326 acres)	Impacts to residential & agricultural land uses NW of Ames. Residential, agricultural and Public Lands NE of Ames & Story City. Housing developments in Western Story County and Eastern Boone County. Scattered farm residences in both counties. (10,660 acres)	Impacts to residential developments, cemeteries, and agricultural land. (7,355 acres)	Impacts to residential area (ISU housing), recreation land, parks and conservation land, and agricultural land uses. (709 acres)	Impacts to small areas of residential and commercial, southern edge of Ames Municipal Airport, recreation, conservation, and agricultural land. (1,370 acres)	Impacts to small areas of commercial land adjacent to South Duff Road Bridge, open space, agricultural land adjacent to US 30 bridge. (70 acres)	Impacts to commercial and agricultural land. (10 acres)
Farmland	Impacted.	Impacted.	Impacted.	Impacted.	Impacted.	Impacted.	No impact.
Parks, Recreation Areas & Conservation Areas	No impact.	Impacts to Story City Park, River Bend Municipal Golf Course, 12 conservation and recreation areas between Ames and Story City.	Impacts to the Bob Pyle Marsh WMA.	Impacts to Skunk River Greenbelt WMA, Crooked Bend WMA, Bear Creek Area, and Soper's Mill County Park, Veenker Memorial Golf Course, part of the Ames High Prairie State Preserve, the Furman Aquatic Park in Ames, and the ISU Stable Run Disc Golf Course.	Would divide the Ames Golf and Country Club and the Ada Hayden Heritage Park by creating a channel through these areas.	No impact.	No impact.
Wetlands	Would increase existing wetland conservation areas in partnership with the Iowa Dept of Agriculture and Land Stewardship.	Impacts to approximately 840 acres.	Impacts to approximately 800 acres.	Impacts to approximately 540 acres.	Impacts to approximately 10 acres.	No impact.	No impact.
Surface Water	No impact.	Impacts to approximately 15 miles of Skunk River and approximately 7.5 miles of Squaw Creek.	Impacts to approximately 5.5 miles of Skunk River; approximately 5.3 miles of the Keigley Branch of the Skunk River; approximately 3.0 miles of Bear Creek, and approximately 2.8 miles of Long Dick Creek. This alternative would also flood approximately 10.5 miles of Squaw Creek, approximately 2.7 miles of Montgomery Creek, and approximately 2.6 miles of Onion Creek.	Impacts to approximately 6.5 miles of Squaw Creek and approximately 2.5 miles of Skunk River.	No impacts to existing streams; however construction of these diversions would create a total of 17 miles of new stream channel. Construction of these diversions would affect flow in both the Skunk River and Squaw Creek.	Impacts to short stretches of stream channel near the South Duff Bridge and the Highway 30 Bridge during construction.	No impact.
Threatened & Endangered Species	No impact.	Potential impacts.	Potential impacts.	Potential impacts.	Potential impacts.	Potential impacts.	Potential impacts.
Cultural Resources – Historical & Archaeological	No impact.	Impacts to 93 archaeological sites and 17 historic structures with the construction of SR-1, and 17 archaeological sites and 46 historic structures with the construction of SC-1.	Impacts to 18 archaeological sites and 22 historic structures.	Impacts to 66 archaeological sites and 5 historic structures.	Impacts to 9 archaeological sites and 7 historic structures.	Impacts to 3 archaeological sites and 2 historic structures.	Impacts to 3 archaeological sites and 24 historic structures.
Socio-Economic Resources	No impact.	Impacts to approximately 150 residences from construction of SR-1 and 75 residences from construction of SC-1. Construction of SR-1 and SC-1 would preclude further development in and near affected areas. Construction of SR-1 would also affect Story City's wastewater treatment plant, a school and associated athletic facilities, and 2-3 businesses in Story City.	Impacts to approximately 110 residences, farms, and acreages.	Impacts to part of the ISU housing area, approximately 25 residences, 2 businesses, a golf course, and a water park.	Impacts to approximately 60 residences, a 25-residence trailer park, approximately 5 businesses, and the approach lighting in the clear zone of the Ames Municipal Airport.	Impacts to businesses adjacent to the South Duff Road bridge and open space and agricultural land adjacent to the US 30 bridge.	Impacts to approximately 10 to 15 businesses.
Environmental Justice	No impacts.	Impacts to minorities, low-income, elderly and LEP populations.	No impacts.	Impacts to minorities, low-income, elderly and LEP populations.	Impacts to minorities, low-income, elderly and LEP populations.	No impact.	Impacts to minorities, low-income, elderly and LEP populations.
Transportation	No impacts.	Impacts to US 69, Broad Street in Story City, 130th, 150th, 170th, 180th, and 190th Streets, as well as local roads with the construction of SR-1. Construction of SC-1 would affect 140th, 150th, 160th, 170th, and 180th Streets. Potential impacts to airspace at the Ames Municipal Airport.	Impacts to 100th, 110th, 120th, 130th, 140th, 150th, and 160th Streets, as well as local roads. Potential impacts to airspace at the Ames Municipal Airport.	Impacts to 150th, 160th, 170th, and 190th Streets. Would also require raising the following roads 5 feet and modifying bridges/culverts at these locations: Boone County Road 160 at Squaw Creek, Story County Road 170 at the Skunk River, and 13th Street in Ames at Squaw Creek. Potential impacts to airspace at the Ames Municipal Airport.	Would cut across several roads in Ames, including US 30, Lincoln Way, South Duff Avenue, George Washington Carver Avenue, 180th Street, 520th Avenue, and 530th Avenue. Bridges would need to be constructed, or in some cases, reconstructed. Potential impacts to the UPRR tracks and airspace at the Ames Municipal Airport.	Temporary impacts to roads within the Project Area. Would also require the lengthening the Hwy 30 Bridge over the Skunk River and the South Duff Bridge over Squaw Creek. Impacts to the approach lighting at the southern end of the runway at Ames Municipal Airport and potential impacts to the airspace.	Temporary impacts to roads within the Project Area. Potential impacts to the UPRR tracks and airspace at the Ames Municipal Airport.
Noise	Construction of any alternatives selected would be temporary and intermittent. It is not anticipated that any acceptable noise levels would be generated by construction of the selected alternatives.						
Regulated Materials	No impacts.	15 leaking UST's within 1 mile of SR-1. 1 leaking UST is within the proposed footprint of SR-1.	15 leaking UST's, 1 Iowa contaminated site and 1 non-NPL Superfund site.	10 leaking UST sites, 1 non-NPL Superfund site, and 1 Iowa contaminated site within 1 mile of the 13th Avenue site in Ames.	5 leaking USTs within 1 mile.	31 leaking UST sites, 2 non-NPL Superfund site, and 6 no leaking USTs within the proposed footprint s are within 1 mile.	45 leaking UST sites, 6 non-NPL Superfund sites, and 6 Iowa contaminated sites are within 1 mile. 1 leaking UST is located within the footprint of the Squaw Creek levee.
Air Quality	No impacts.	Would generate minor amounts of emissions from construction equipment and fugitive dust from soil disturbance.	Would generate minor amounts of emissions from construction equipment and fugitive dust from soil disturbance.	Would generate minor amounts of emissions from construction equipment and fugitive dust from soil disturbance.	Would generate minor amounts of emissions from construction equipment and fugitive dust from soil disturbance.	Would generate minor amounts of emissions from construction equipment and fugitive dust from soil disturbance.	No impacts.
Is this alternative free of major environmental impacts?	☑	☒	☒	☒	☒	☑	☑

Key: ☑ = Yes; ☒ = No

Evaluation Process



Get Involved!

We want to hear from you:

- Complete a comment form today
- Visit us at **www.cityofames.org** and click the Flood Mitigation Study link
- Email us at **amesfloodstudy@cityofames.org**
- Send mail to:

  City of Ames

  Attn: John Dunn

  300 E. 5th Street

  Ames, IA 50010

Evaluation Process

Comment Guidelines

- Come up to the podium one person at a time.
- State and spell your name.
- You have 5 minutes to speak, as to ensure that everyone gets the opportunity to be heard.
- Please allow everyone to comment once before commenting a second time.
- Be kind and courteous to all.