

Appendix I Capital Improvement Project Prioritization Ranking Worksheets

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- CIP Prioritization Ranking Worksheets

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Prioritization Ranking for Watershed Master Plan Projects

City of Lincoln, Nebraska

Prepared By:	Mark Meyer, PE	Date:	2/7/18
Project ID:	OC-01	Watershed:	Oak Creek
Project Location:	325 ft downstream from the W Crow St culvert.		
Project Description:	Reset and Stabilize Pipe Outfall on Tributary OC020R005		

Issues Addressed:

Flooding Impacts**

Projects primarily intended to address structural or non-structural flooding will always incorporate a high or low risk safety factor; though typically will not incorporate stream stability or water quality benefits.

Flooding Benefits		Points, P _{FD}
Major Structural Flooding Damage		30
Minor Structural Flooding Damage		20
Non-Structural Flooding	Streets / ROW, Other	15
Conservation / Prevention	Easements / Acquisitions	10
None		0
		P_{FD} = 0

Flooding Frequency		Multiplier, C _{FF}
Frequent Flooding	More frequent than 10-year storm	4
Infrequent Flooding	Less frequent than 10-year storm	2
None		0
		C_{FF} = 0

A = P_{FD} * C_{FF}	0
	0
	0

Structural and Non-Structural Flooding

Stream Stability

Projects primarily intended for stream stability typically will not incorporate flooding impact benefits; though will incorporate water quality benefits.

Stream Stability Benefit		Points, P _{ET}
Channel Erosion Threatening to Structures		50
Channel Erosion Threatening to Public Infrastructure		40
Channel Erosion Threatening to Natural Resources		35
Conservation / Prevention		10
Stream Stability benefit due to Flood Control or Water Quality Project		10
None		0
		P_{ET} = 40

Erosion Activity / Systemic Threat		Multiplier, C _{EA}
Aggressive Erosion		3
Non-Aggressive Erosion		2
None		0
		C_{EA} = 3

B = P_{ET} * C_{EA}	40
	3
	120

Open Channel and Surface Erosion

Water Quality

Projects primarily intended for water quality typically will not incorporate flooding impact benefits; though may incorporate stream stability benefits.

Water Quality Benefits		Points, P _{WQ}
Enhance / Preserve Natural Resource Areas (Lake, Wetlands, etc.)		60
Regulatory Compliance / Stormwater Permit / NPDES		60
Create New Natural Resource Areas (Lakes, Wetlands, etc.)		50
Conservation / Prevention		30
Water Quality benefit due to Flood Control or Stream Stability Project		20
None		0
		P_{WQ} = 20

Project Benefit		Multiplier, C _{WB}
Major Water Quality Benefit	Broad-Based Impacts	4
Minor Water Quality Benefit	Localized Impacts	3
None		0
		C_{WB} = 3

C = P_{WQ} * C_{WB}	20
	3
	60

Water Quality, Wetlands, Natural Habitat

Safety Factor

Public Health and Safety		Points, P _{SF}
High Risk	Potential Loss of Life or Bodily Injury	160
Low Risk	Public Nuisance	60
No Risk		0
		P_{SF} = 0

D = P_{SF}	0
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Public Health and Safety

Prioritization Ranking Summary

X = A + B + C + D		180
Miscellaneous Factors may be used to adjust scoring:		
P _{MISC} (See attached worksheet for description of miscellaneous items)		30
May Include: Project Location, Coincident Projects, Development Status, etc.		
P _{AC} , Additional Considerations (may be used to add or subtract up to 60 points)		0
May Include: Legal Issues, Jurisdictional Coordination, Complaints, Outside Funding Sources, Wildlife Benefits, etc.		
TOTAL = X + P_{MISC} + P_{AC}		210
TOTAL for PROJECT OC-01		210

Project Location, Development Status, Coincident Projects, Condition / Maintenance, Downstream Impacts, Source Reduction, Additional Considerations

Comments or Description of Additional Considerations:

**Flooding impacts were not analyzed as part of this CIP process.

MISCELLANEOUS FACTORS - DRAFT

		Points Available	Points Assigned
Location	Public Property or willing owner of Private Property	up to 20	20
Coincident with Adjacent Projects	Public Projects (water, sanitary, roads, etc.)	up to 20	
	Private Projects	up to 10	
Development Status (Points available are fixed, and are not flexible)	Tier I, Priority A	20	
	Tier I, Priority B	15	
	Tier I, Priority C	10	
	Existing City Limits	10	10
	Tier II (development 25 - 50 years)	5	0
	Tier III (development > 50 years)	0	
<p>Tier I, Priority A - Areas designated for near term development are generally contiguous to existing development and should be provided first with basic infrastructure within 6 years of the adoption of the Plan. Some of the infrastructure required for development may already be in place. This area includes some land already annexed, with City commitments to fund infrastructure improvements, but the land is still undeveloped and without significant infrastructure in place yet. Some infrastructure improvements may be done in the near term while others, such as road improvements that are generally more costly, may take longer to complete.</p> <p>Tier I, Priority B - The next areas for development, beyond Priority A, are those which currently lack almost all of the infrastructure required to support development. In areas with this designation, the community will maintain present uses until urban development can commence. Infrastructure improvements to serve this area will not initially be included in the City's CIP, but will be actively planned for in the longer term capital improvement planning of the various city and county departments.</p> <p>Tier I, Priority C - This is the later phase of development areas and is intended to be served after Priority A and B. Given current growth rates and infrastructure financing, development would not begin in this area until after 2020 or 2025.</p>			
Total Miscellaneous Points, P_{MISC} =			30

Prioritization Ranking for Watershed Master Plan Projects
City of Lincoln, Nebraska

Prepared By:	Mark Meyer, PE	Date:	2/7/18
Project ID:	OC-02	Watershed:	Oak Creek
Project Location:	975 ft upstream of the W Crow St culvert crossing		
Project Description:	Grade Control Knickpoint on Tributary OC020R005		

Issues Addressed:

Flooding Impacts**

Projects primarily intended to address structural or non-structural flooding will always incorporate a high or low risk safety factor; though typically will not incorporate stream stability or water quality benefits.

Flooding Benefits		Points, P _{FD}
Major Structural Flooding Damage		30
Minor Structural Flooding Damage		20
Non-Structural Flooding	Streets / ROW, Other	15
Conservation / Prevention	Easements / Acquisitions	10
None		0
		P_{FD} = 0

Flooding Frequency		Multiplier, C _{FF}
Frequent Flooding	More frequent than 10-year storm	4
Infrequent Flooding	Less frequent than 10-year storm	2
None		0
		C_{FF} = 0

A = P_{FD} * C_{FF}	0
	0
	0

Structural and Non-Structural Flooding

Stream Stability

Projects primarily intended for stream stability typically will not incorporate flooding impact benefits; though will incorporate water quality benefits.

Stream Stability Benefit		Points, P _{ET}
Channel Erosion Threatening to Structures		50
Channel Erosion Threatening to Public Infrastructure		40
Channel Erosion Threatening to Natural Resources		35
Conservation / Prevention		10
Stream Stability benefit due to Flood Control or Water Quality Project		10
None		0
		P_{ET} = 35

Erosion Activity / Systemic Threat		Multiplier, C _{EA}
Aggressive Erosion		3
Non-Aggressive Erosion		2
None		0
		C_{EA} = 3

B = P_{ET} * C_{EA}	35
	3
	105

Open Channel and Surface Erosion

Water Quality

Projects primarily intended for water quality typically will not incorporate flooding impact benefits; though may incorporate stream stability benefits.

Water Quality Benefits		Points, P _{WQ}
Enhance / Preserve Natural Resource Areas (Lake, Wetlands, etc.)		60
Regulatory Compliance / Stormwater Permit / NPDES		60
Create New Natural Resource Areas (Lakes, Wetlands, etc.)		50
Conservation / Prevention		30
Water Quality benefit due to Flood Control or Stream Stability Project		20
None		0
		P_{WQ} = 20

Project Benefit		Multiplier, C _{WB}
Major Water Quality Benefit	Broad-Based Impacts	4
Minor Water Quality Benefit	Localized Impacts	3
None		0
		C_{WB} = 3

C = P_{WQ} * C_{WB}	20
	3
	60

Water Quality, Wetlands, Natural Habitat

Safety Factor

Public Health and Safety		Points, P _{SF}
High Risk	Potential Loss of Life or Bodily Injury	160
Low Risk	Public Nuisance	60
No Risk		0
		P_{SF} = 0

D = P_{SF}	0
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Public Health and Safety

Prioritization Ranking Summary

Miscellaneous Factors may be used to adjust scoring:

P _{MISC} (See attached worksheet for description of miscellaneous items)	30
May Include: Project Location, Coincident Projects, Development Status, etc.	
P _{AC} , Additional Considerations (may be used to add or subtract up to 60 points)	0
May Include: Legal Issues, Jurisdictional Coordination, Complaints, Outside Funding Sources, Wildlife Benefits, etc.	
TOTAL = X + P_{MISC} + P_{AC}	195
TOTAL for PROJECT OC-02	195

Project Location, Development Status, Coincident Projects, Condition / Maintenance, Downstream Impacts, Source Reduction, Additional Considerations

Comments or Description of Additional Considerations:

**Flooding impacts were not analyzed as part of this CIP process.

MISCELLANEOUS FACTORS - DRAFT

		Points Available	Points Assigned
Location	Public Property or willing owner of Private Property	up to 20	20
Coincident with Adjacent Projects	Public Projects (water, sanitary, roads, etc.)	up to 20	
	Private Projects	up to 10	
Development Status (Points available are fixed, and are not flexible)	Tier I, Priority A	20	
	Tier I, Priority B	15	
	Tier I, Priority C	10	
	Existing City Limits	10	10
	Tier II (development 25 - 50 years)	5	0
	Tier III (development > 50 years)	0	
<p>Tier I, Priority A - Areas designated for near term development are generally contiguous to existing development and should be provided first with basic infrastructure within 6 years of the adoption of the Plan. Some of the infrastructure required for development may already be in place. This area includes some land already annexed, with City commitments to fund infrastructure improvements, but the land is still undeveloped and without significant infrastructure in place yet. Some infrastructure improvements may be done in the near term while others, such as road improvements that are generally more costly, may take longer to complete.</p> <p>Tier I, Priority B - The next areas for development, beyond Priority A, are those which currently lack almost all of the infrastructure required to support development. In areas with this designation, the community will maintain present uses until urban development can commence. Infrastructure improvements to serve this area will not initially be included in the City's CIP, but will be actively planned for in the longer term capital improvement planning of the various city and county departments.</p> <p>Tier I, Priority C - This is the later phase of development areas and is intended to be served after Priority A and B. Given current growth rates and infrastructure financing, development would not begin in this area until after 2020 or 2025.</p>			
Total Miscellaneous Points, P_{MISC} =			30

Prioritization Ranking for Watershed Master Plan Projects
City of Lincoln, Nebraska

Prepared By:	Mark Meyer, PE	Date:	2/7/18
Project ID:	OC-03	Watershed:	Oak Creek
Project Location:	1,000 ft south of US Highway 34		
Project Description:	Grade Control Knickzones on Mainstem ECR010		

Issues Addressed:

Flooding Impacts**

Projects primarily intended to address structural or non-structural flooding will always incorporate a high or low risk safety factor; though typically will not incorporate stream stability or water quality benefits.

Flooding Benefits		Points, P _{FD}
Major Structural Flooding Damage		30
Minor Structural Flooding Damage		20
Non-Structural Flooding	Streets / ROW, Other	15
Conservation / Prevention	Easements / Acquisitions	10
None		0
		P_{FD} = 0

Flooding Frequency		Multiplier, C _{FF}
Frequent Flooding	More frequent than 10-year storm	4
Infrequent Flooding	Less frequent than 10-year storm	2
None		0
		C_{FF} = 0

A = P_{FD} * C_{FF}	0
	0
	0

Structural and Non-Structural Flooding

Stream Stability

Projects primarily intended for stream stability typically will not incorporate flooding impact benefits; though will incorporate water quality benefits.

Stream Stability Benefit		Points, P _{ET}
Channel Erosion Threatening to Structures		50
Channel Erosion Threatening to Public Infrastructure		40
Channel Erosion Threatening to Natural Resources		35
Conservation / Prevention		10
Stream Stability benefit due to Flood Control or Water Quality Project		10
None		0
		P_{ET} = 35

Erosion Activity / Systemic Threat		Multiplier, C _{EA}
Aggressive Erosion		3
Non-Aggressive Erosion		2
None		0
		C_{EA} = 2

B = P_{ET} * C_{EA}	35
	2
	70

Open Channel and Surface Erosion

Water Quality

Projects primarily intended for water quality typically will not incorporate flooding impact benefits; though may incorporate stream stability benefits.

Water Quality Benefits		Points, P _{WQ}
Enhance / Preserve Natural Resource Areas (Lake, Wetlands, etc.)		60
Regulatory Compliance / Stormwater Permit / NPDES		60
Create New Natural Resource Areas (Lakes, Wetlands, etc.)		50
Conservation / Prevention		30
Water Quality benefit due to Flood Control or Stream Stability Project		20
None		0
		P_{WQ} = 20

Project Benefit		Multiplier, C _{WB}
Major Water Quality Benefit	Broad-Based Impacts	4
Minor Water Quality Benefit	Localized Impacts	3
None		0
		C_{WB} = 3

C = P_{WQ} * C_{WB}	60
	3
	180

Water Quality, Wetlands, Natural Habitat

Safety Factor

Public Health and Safety		Points, P _{SF}
High Risk	Potential Loss of Life or Bodily Injury	160
Low Risk	Public Nuisance	60
No Risk		0
		P_{SF} = 60

D = P_{SF}	60
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Public Health and Safety

Prioritization Ranking Summary

Miscellaneous Factors may be used to adjust scoring:

P_{MISC} (See attached worksheet for description of miscellaneous items) → 0

May include: Project Location, Coincident Projects, Development Status, etc.

P_{AC}, Additional Considerations (may be used to add or subtract up to 60 points) → 0

May include: Legal Issues, Jurisdictional Coordination, Complaints, Outside Funding Sources, Wildlife Benefits, etc.

TOTAL = X + P_{MISC} + P_{AC} → 310

TOTAL for PROJECT OC-03 → 310

Project Location, Development Status, Coincident Projects, Condition / Maintenance, Downstream Impacts, Source Reduction, Additional Considerations

Comments or Description of Additional Considerations:

**Flooding impacts were not analyzed as part of this CIP process.

MISCELLANEOUS FACTORS - DRAFT

		Points Available	Points Assigned
Location	Public Property or willing owner of Private Property	up to 20	0
Coincident with Adjacent Projects	Public Projects (water, sanitary, roads, etc.)	up to 20	
	Private Projects	up to 10	
Development Status (Points available are fixed, and are not flexible)	Tier I, Priority A	20	
	Tier I, Priority B	15	
	Tier I, Priority C	10	
	Existing City Limits	10	0
	Tier II (development 25 - 50 years)	5	0
	Tier III (development > 50 years)	0	
<p>Tier I, Priority A - Areas designated for near term development are generally contiguous to existing development and should be provided first with basic infrastructure within 6 years of the adoption of the Plan. Some of the infrastructure required for development may already be in place. This area includes some land already annexed, with City commitments to fund infrastructure improvements, but the land is still undeveloped and without significant infrastructure in place yet. Some infrastructure improvements may be done in the near term while others, such as road improvements that are generally more costly, may take longer to complete.</p> <p>Tier I, Priority B - The next areas for development, beyond Priority A, are those which currently lack almost all of the infrastructure required to support development. In areas with this designation, the community will maintain present uses until urban development can commence. Infrastructure improvements to serve this area will not initially be included in the City's CIP, but will be actively planned for in the longer term capital improvement planning of the various city and county departments.</p> <p>Tier I, Priority C - This is the later phase of development areas and is intended to be served after Priority A and B. Given current growth rates and infrastructure financing, development would not begin in this area until after 2020 or 2025.</p>			
Total Miscellaneous Points, P_{MISC} =			0

Prioritization Ranking for Watershed Master Plan Projects
City of Lincoln, Nebraska

Prepared By: Mark Meyer, PE Date: 2/7/18
 Project ID: OC-04 Watershed: Oak Creek
 Project Location: approximately 2,600 ft south of the intersection of US Highway 34 and NW 70th St to NW 84th St.
 Project Description: Grade Control Incision on Mainstem ECR020

Issues Addressed:

Flooding Impacts**
 Projects primarily intended to address structural or non-structural flooding will always incorporate a high or low risk safety factor; though typically will not incorporate stream stability or water quality benefits.

Flooding Benefits		Points, P _{FD}
Major Structural Flooding Damage		30
Minor Structural Flooding Damage		20
Non-Structural Flooding	Streets / ROW, Other	15
Conservation / Prevention	Easements / Acquisitions	10
None		0
		P_{FD} = 0

Flooding Frequency		Multiplier, C _{FF}
Frequent Flooding	More frequent than 10-year storm	4
Infrequent Flooding	Less frequent than 10-year storm	2
None		0
		C_{FF} = 0

A = P_{FD} * C_{FF} = 0

Structural and Non-Structural Flooding

Stream Stability
 Projects primarily intended for stream stability typically will not incorporate flooding impact benefits; though will incorporate water quality benefits.

Stream Stability Benefit		Points, P _{ET}
Channel Erosion Threatening to Structures		50
Channel Erosion Threatening to Public Infrastructure		40
Channel Erosion Threatening to Natural Resources		35
Conservation / Prevention		10
Stream Stability benefit due to Flood Control or Water Quality Project		10
None		0
		P_{ET} = 50

Erosion Activity / Systemic Threat		Multiplier, C _{EA}
Aggressive Erosion		3
Non-Aggressive Erosion		2
None		0
		C_{EA} = 3

B = P_{ET} * C_{EA} = 150

Open Channel and Surface Erosion

Water Quality
 Projects primarily intended for water quality typically will not incorporate flooding impact benefits; though may incorporate stream stability benefits.

Water Quality Benefits		Points, P _{WQ}
Enhance / Preserve Natural Resource Areas (Lake, Wetlands, etc.)		60
Regulatory Compliance / Stormwater Permit / NPDES		60
Create New Natural Resource Areas (Lakes, Wetlands, etc.)		50
Conservation / Prevention		30
Water Quality benefit due to Flood Control or Stream Stability Project		20
None		0
		P_{WQ} = 20

Project Benefit		Multiplier, C _{WB}
Major Water Quality Benefit	Broad-Based Impacts	4
Minor Water Quality Benefit	Localized Impacts	3
None		0
		C_{WB} = 3

C = P_{WQ} * C_{WB} = 60

Water Quality, Wetlands, Natural Habitat

Safety Factor

Public Health and Safety		Points, P _{SF}
High Risk	Potential Loss of Life or Bodily Injury	160
Low Risk	Public Nuisance	60
No Risk		0
		P_{SF} = 60

D = P_{SF} = 60

Public Health and Safety

Prioritization Ranking Summary

X = A + B + C + D = 270

Miscellaneous Factors may be used to adjust scoring:

P_{MISC} (See attached worksheet for description of miscellaneous items) → 0
 May include: Project Location, Coincident Projects, Development Status, etc.

P_{AC}, Additional Considerations (may be used to add or subtract up to 60 points) → 0
 May include: Legal Issues, Jurisdictional Coordination, Complaints, Outside Funding Sources, Wildlife Benefits, etc.

TOTAL = X + P_{MISC} + P_{AC} = 270

TOTAL for PROJECT OC-04 = 270

Project Location, Development Status, Coincident Projects, Condition / Maintenance, Downstream Impacts, Source Reduction, Additional Considerations

Comments or Description of Additional Considerations:

**Flooding impacts were not analyzed as part of this CIP process.

MISCELLANEOUS FACTORS - DRAFT

		Points Available	Points Assigned
Location	Public Property or willing owner of Private Property	up to 20	0
Coincident with Adjacent Projects	Public Projects (water, sanitary, roads, etc.)	up to 20	
	Private Projects	up to 10	
Development Status (Points available are fixed, and are not flexible)	Tier I, Priority A	20	
	Tier I, Priority B	15	
	Tier I, Priority C	10	
	Existing City Limits	10	0
	Tier II (development 25 - 50 years)	5	0
	Tier III (development > 50 years)	0	
<p>Tier I, Priority A - Areas designated for near term development are generally contiguous to existing development and should be provided first with basic infrastructure within 6 years of the adoption of the Plan. Some of the infrastructure required for development may already be in place. This area includes some land already annexed, with City commitments to fund infrastructure improvements, but the land is still undeveloped and without significant infrastructure in place yet. Some infrastructure improvements may be done in the near term while others, such as road improvements that are generally more costly, may take longer to complete.</p> <p>Tier I, Priority B - The next areas for development, beyond Priority A, are those which currently lack almost all of the infrastructure required to support development. In areas with this designation, the community will maintain present uses until urban development can commence. Infrastructure improvements to serve this area will not initially be included in the City's CIP, but will be actively planned for in the longer term capital improvement planning of the various city and county departments.</p> <p>Tier I, Priority C - This is the later phase of development areas and is intended to be served after Priority A and B. Given current growth rates and infrastructure financing, development would not begin in this area until after 2020 or 2025.</p>			
Total Miscellaneous Points, P_{MISC} =			0