

CHEHALIS CITY COUNCIL AGENDA

CITY HALL
350 N MARKET BLVD | CHEHALIS, WA 98532

Terry F. Harris, District 1, Mayor Pro Tem Daryl J. Lund, District 2 Dr. Isaac S. Pope, District 4	Dennis L. Dawes, Position at Large Mayor	Anthony E. Ketchum Sr., District 3 Chad E. Taylor, Position at Large Robert J. Spahr, Position at Large
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Regular Meeting of Monday, September 23, 2019 5:00 p.m.

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| 1. <u>Call to Order.</u> (Mayor) |
| 2. <u>Pledge of Allegiance.</u> (Mayor) |

PROCLAMATIONS / PRESENTATIONS		
3. <u>Proclamation – Childhood Cancer Awareness.</u> (Mayor)		
4. <u>Proclamation – CROP Hunger Walk.</u> (Mayor)		

CITIZENS BUSINESS
This is an opportunity for members of the audience to address the council on matters not listed elsewhere on the agenda. Speaker identification forms are available at the door and may be given to the city clerk prior to the beginning of the meeting.

ITEM	ADMINISTRATION RECOMMENDATION	PAGE
CONSENT CALENDAR		
5. <u>Minutes of the Regular City Council Meeting of September 9, 2019.</u> (City Clerk)	APPROVE	1
6. <u>Minutes of the Special City Council Meeting of September 18, 2019.</u> (City Clerk)	APPROVE	3
7. <u>Vouchers and Transfers – Accounts Payable.</u> (City Manager, Finance Director)	APPROVE	4

CONSENT CALENDAR CONTINUED ON NEXT PAGE

ITEM	ADMINISTRATION RECOMMENDATION	PAGE
CONSENT CALENDAR - CONTINUED		
8. <u>Acceptance of Grant Funding: State of Washington Recreation and Conservation Office Amendment No. 1 to Agreement No. RCO #19-1187 for Phase II of the Flood Storage Basin Master Plan.</u> (City Manager, Public Works Director)	APPROVE	6
9. <u>Engineering Services Agreement with Skillings Connolly, Inc., for an Amount Not to Exceed \$316,675.53 for the Flood Storage Basin Master Plan – Phase II.</u> (City Manager, Public Works Director)	APPROVE	10
10. <u>Resolution No. 11-2019, First and Final Reading – Declaring Property Surplus.</u> (City Manager, City Clerk)	ADOPT	39
11. <u>Floodplain Management Planning Annual Progress Report.</u> (City Manager, Public Works Director, Development Review Specialist)	APPROVE	43

ITEM	ADMINISTRATION RECOMMENDATION	PAGE
NEW BUSINESS		
12. <u>Recreation Park Improvement Project – Request to Use Funds Designated for the Project to Proceed with Change Orders to Advance the Work Needed.</u> (City Manager, Public Works Director, Recreation Manager)	APPROVE	48
13. <u>Chehalis River Raw Water Pipeline Replacement Study Project.</u> (City Manager, Public Works Director, Water Superintendent)	AUTHORIZE STAFF TO PROCEED WITH ALIGNMENT 2B.	50

ITEM	ADMINISTRATION RECOMMENDATION	PAGE
ADMINISTRATION AND CITY COUNCIL REPORTS		
14. <u>Administration Reports.</u> a. City Manager Update – Strategic Planning. (City Manager)	INFORMATION ONLY	- - -
15. <u>Councilor Reports/Committee Updates.</u> (City Council)	INFORMATION ONLY	- - -

EXECUTIVE SESSION
16. Pursuant to RCW: a. 42.30.110(1)(b) – Selection of Site or Acquisition of Real Estate b. 42.30.110(1)(c) – Minimum Price at Which Real Estate Will Be Offered for Sale/Lease c. 42.30.110(1)(i) – Litigation/Potential Litigation d. 42.30.140(4)(b) – Collective Bargaining

**THE CITY COUNCIL MAY ADD AND TAKE ACTION ON OTHER ITEMS NOT LISTED ON THIS AGENDA.
NEXT REGULAR CITY COUNCIL MEETING IS MONDAY, OCTOBER 14, 2019.**

September 9, 2019

The Chehalis city council met in regular session on Monday, September 9, 2019, in the Chehalis city hall. Mayor Dennis Dawes called the meeting to order at 5:00 pm with the following council members present: Terry Harris, Tony Ketchum, Daryl Lund, and Bob Spahr. Councilors Dr. Isaac Pope and Chad Taylor were absent (excused). Staff present included: Jill Anderson, City Manager; Ken Cardinale, Fire Chief; Caryn Foley, City Clerk; Bill Hillier, City Attorney; Trent Loughed, Public Works Director/City Engineer; Brandon Rakes, Airport Operations Coordinator; Chun Saul, Finance Director; Glenn Schaffer, Police Chief; Judy Schave, HR/Risk Manager; and Lilly Wall, Recreation Manager. No members of the news media were present.

1. **Consent Calendar.** Councilor Spahr moved to approve the consent calendar comprised of the following:

- a. Minutes of the regular meeting of August 26, 2019;
- b. August 30, 2019 Claim Vouchers No. 126709-126840 in the amount of \$412,357.02;
- c. August 30, 2019, Payroll Vouchers No. 40981-41032, Direct Deposit Payroll Vouchers No. 11136-11261, Electronic Federal Tax and DRS Pension/Deferred Comp Payments No. 255-259 in the amount of \$855,723.70;
- d. Offer to lease Tract 16-B on NW Louisiana Avenue (by Home Depot/Taco Bell) by Riptide 6, LLC;
- e. Resolution No. 10-2019, first and final reading – delegating signing authority to the Finance Director for reimbursement on federally funded transportation projects; and
- f. Implementation of ACH (Automated Clearing House) payment options for accounts payable (AP) vendor payments.

The motion was seconded by Councilor Lund and carried unanimously.

2. **Recognition of Richard DeBolt by the Washington Recreation and Park Association (WRPA).** Mayor Dawes stated one of the projects the city has been working on was Recreation Park. Richard DeBolt was one of many that led the charge in making sure that \$12 million were allocated by the Legislature for the Youth Athletic Facilities Program, which included not only the Recreation Park project, but 25 other communities' projects. Rep. DeBolt also endorsed another grant for \$257,500 for Recreation Park. Mayor Dawes thanked Rep. DeBolt for his efforts on behalf of the 20th District.

WRPA state lobbyist Doug Levy and WRPA President-Elect Paul Simmons recognized Rep. DeBolt with a certificate of appreciation of his efforts to secure \$12 million in the 2019-2020 Capital Budget for Youth Athletic Facilities Program giving kids throughout the state enhanced access to ballfields and courts, higher quality play time, and positive outlets for healthy living.

Rep. DeBolt thanked the community, specifically Lilly Wall for testifying in front of the House and the Senate. He stated that our kids are what make our communities special. He thanked everyone for the award.

3. **Purchase of Exterior Ballistic Vests for Police Officers.** Chief Schaffer stated many officers would like to change from interior to exterior ballistic vests. Currently, all gear worn by the officers is on their belts, which is uncomfortable and hard on backs and hips. The exterior carriers would allow for much of the gear to be worn off of the belts to relieve some of the stress. The cost to outfit 12 officers would be \$475 each. The vests were not budgeted in 2019, but because the process for ordering takes some time, Chief Schaffer requested that the vests be purchased immediately instead of waiting until 2020.

Councilor Harris asked if a budget amendment would be necessary. Chun Saul indicated that was correct.

Councilor Spahr asked if exterior vests were something new. Chief Schaffer stated they were becoming more common and are very popular in the military.

Councilor Spahr moved to appropriate \$5,700 from the General Fund to the Police Department's budget for the purchase of exterior vests. The motion was seconded by Councilor Harris.

Mayor Dawes expressed his support of the purchase. The motion carried unanimously.

September 9, 2019

4. Administration Reports.

a. **City Manager Update.** City Manager Anderson stated Recreation Park construction was moving forward. The contractor is performing in an outstanding way, as is the construction manager. The Tri-Club Rotary group will be awarding a check to the Chehalis Foundation and the City on Wednesday at noon at the V.R. Lee Building in the amount of \$47,000, which were the proceeds from the auction held last spring for Penny Playground. A strategic planning session is set for September 18 in the City Hall basement, which is open to the public.

5. Councilor Reports/Committee Updates.

a. Councilor Lund stated he has received comments from citizens concerned about the homeless people in the area of the water filter plant and parks along the hillside.

b. Councilor Harris attended the ribbon cutting for the new schools and was able to spend some time with both the Shaw and Smith families.

c. Mayor Dawes attended the Centralia city council's workshop on fireworks on August 26. They discussed both limiting the sale and discharge of fireworks. It appears they will curtail the hours and days to discharge fireworks. He thought it was a losing battle because he didn't think complaints were coming from fireworks that are legal, but rather those from tribal reservations. It is also difficult to enforce. He thought it was something that could be brought up at the strategic planning session. He also attended the mayors' meeting. The November meeting will be the legislative round-table. He also asked if the box-spring sitting along National Avenue across from Callison's could be picked up. He didn't know where it came from, but asked staff to contact the furniture store on Market and ask them not to leave old furniture out in case that is where it came from.

6. **Executive Session.** Mayor Dawes announced the council would take a short recess and then be in executive session pursuant to RCW 42.30.110(1)(b) – Selection of Site or Acquisition of Real Estate; RCW 42.30.110(1)(g) – Review Performance of a Public Employee; and RCW 42.30.140(4)(b) – Collective Bargaining, not to exceed 6:30 pm and there would be no decision following conclusion of the executive session. Mayor Dawes closed the regular meeting at 5:25 pm. The executive session began at 5:27 pm. Following conclusion of the executive session, the regular meeting was reopened and immediately adjourned at 6:30 pm.

Dennis L. Dawes, Mayor

Caryn Foley, City Clerk

Approved:
Initials: _____

September 18, 2019

The Chehalis city council met in special session on Wednesday, September 18, 2019, in the Chehalis city hall. Mayor Dennis Dawes called the meeting to order at 8:30 am with the following council members present: Terry Harris, Dr. Isaac Pope, Bob Spahr, and Chad Taylor. Councilors Tony Ketchum and Daryl Lund were absent (excused). Staff present included: Jill Anderson, City Manager; Ken Cardinale, Fire Chief; Caryn Foley, City Clerk; Melody Guenther, Court Administrator; Andrew Hunziker, Property/Facilities Manager; Randy Kaut, Deputy Police Chief; Trent Lougheed, Public Works Director; Brandon Rakes, Airport Operations Coordinator; Glenn Schaffer, Police Chief; Judy Schave, HR/Risk Manager; Don Schmitt, Street/Storm Superintendent; Dave Vasilauskas, Water Superintendent; Lilly Wall, Recreation Manager; and Patrick Wiltzius, Wastewater Superintendent. No members of the media were present.

1. Strategic Planning Session. Mayor Dawes welcomed everyone and stated the purpose of the special meeting was to hold a strategic planning session.

City Manager Anderson stated the group would be following up on the progress of the goals and six-month objectives from the last planning session held in March 2019. She introduced Marilyn Snider, a strategic planning facilitator with Snider and Associates, and Gail Tsuboi, Graphic Recorder with Tsuboi Design.

Ms. Snider reviewed the city's mission statement, core values, and three-year goals. Ms. Snider led the group to identify:

- Strengths and accomplishments since March 2019
- Current internal weaknesses/challenges
- External factors/trends that may impact the city in the coming year, both positively and negatively
- A vision statement
- A review of the three-year goals, which were reaffirmed
- Six-month objectives for each goal

Note: Councilor Taylor left the meeting at 1:35 pm. The work session continued without a quorum since no action was required by the council.

The next six-month planning session was set for May 14, 2020.

The special meeting concluded at 3:04 pm.

Dennis L. Dawes, Mayor

Caryn Foley, City Clerk

Approved:
Initials: _____

**CHEHALIS CITY COUNCIL MEETING
AGENDA REPORT**

TO: The Honorable Mayor and City Council

FROM: Jill Anderson, City Manager

BY: Chun Saul, Finance Director
Michelle White, Accounting Tech II

MEETING OF: September 23, 2019

SUBJECT: Vouchers and Transfers

ISSUE

City Council approval is requested for Vouchers and Transfers dated September 13, 2019. In addition to the Vouchers and Transfers, approval is requested for voided Check No. 126827, original issue date August 30, 2019, which results in an increase to the General Fund balance in the amount of \$32.00.

DISCUSSION

The September 13, 2019 claim vouchers have been reviewed by a committee of three councilors prior to the release of payments. The administration is requesting City Council approval for Claim Vouchers No. 126841-126976 in the amount of \$1,130,838.34 dated September 13, 2019, and voided Check No. 126827 in the amount of \$32.00 for a net total transfer of \$1,130,806.34 as follows:

- \$ 115,082.07 from the General Fund
 - \$ 3,375.24 from the Dedicated Street Fund – 4% Sales Tax Fund
 - \$ 47,459.50 from the Transportation Benefit District Fund
 - \$ 496,986.52 from the Public Facilities Reserve Fund
 - \$ 4,382.86 from the Automotive Equipment Reserve Fund
 - \$ 580.58 from the Garbage Fund
 - \$ 56,638.06 from the Wastewater Fund
 - \$ 344,459.50 from the Water Fund
 - \$ 5,600.88 from the Storm & Surface Water Utility Fund
 - \$ 56,273.13 from the Airport Fund
- \$ 1,130,838.34 Total Vouchers for September 13, 2019
\$ <32.00> Voided check for August 30, 2019
\$ 1,130,806.34 Net Total Transfers

RECOMMENDATION

It is recommended that the City Council approve the September 13, 2019 Claim Vouchers No. 126841-126976 in the amount of \$1,130,838.34 and the voided Check No. 126827 in the amount of \$32.00.

SUGGESTED MOTION

I move that the City Council approve the September 13, 2019 Claim Vouchers No. 126841-126976 in the amount of \$1,130,838.34 and voided Check No. 126827 in the amount of \$32.00.

**CHEHALIS CITY COUNCIL MEETING
AGENDA REPORT**

TO: The Honorable Mayor and City Council

FROM: Jill Anderson, City Manager

BY: Trent Lougheed, Community Development Director

MEETING OF: September 23, 2019

SUBJECT: Acceptance of Grant Funding: State of Washington Recreation and Conservation Office Amendment No. 1 to Agreement No. RCO #19-1187 for Phase II of the Flood Storage Basin Master Plan

ISSUE

The Chehalis River Basin Flood Authority (FA) provided the City with funding (\$25,000) for Phase I of the Flood Storage Master Plan to identify the project benefits. Phase I indicated that there is a potential to remove 2,600,000 cubic yards of material from this area upon full implementation of the plan.

The Office of the Chehalis Basin (OCB) approved the FA recommendation of authorizing completion of Phase II of the Flood Storage Basin Master Plan, which is estimated to cost \$316,675.53. The funds would be provided through a grant agreement with State of Washington Recreation and Conservation Office (RCO). Phase I was also funded in this manner, so the original agreement would be amended to complete the scope of work for completion of Phase II.

Phase II would complete the master plan for the basin, including preliminary designs, modeling, environmental review and permitting, and everything needed to begin property acquisition and final design. This work would be completed by June 30, 2021.

BACKGROUND

In 2016, the City applied for a grant from the FA for removal of the old Wastewater Treatment Plant on Shoreline Drive. In order to prove the project has a “measurable benefit” to the river system, the City hired Watershed Science and Engineering (FA provided \$12,500 for this effort) to run a hydraulic model, which indicated that 130,000 cubic yards of material needed to be removed from the site to provide the required benefit.

In order to remove the required volume of soil, the project had to be expanded slightly so the City looked at expanding the project to adjacent property. After studying aerial photos of the

area, it became evident that the general area is on an old river oxbow that could be restored to provide even more substantial benefit to the system. Further property research showed that the City already owns a substantial amount of property in the area.

Since this area has a history of severe flooding (most properties are within the Chehalis River Floodway), it was determined that conversion of properties within this basin could provide substantial flood reduction benefits and also provide a location for achievable “compensatory excavation” for future development within the City as directed by the City’s Zero-Rise Ordinance.

As mentioned above, the FA provided the City with funding for Phase I of the Flood Storage Master Plan to demonstrate the feasibility of this project. Phase I indicated that there is a potential to remove 2,600,000 cubic yards of material from this area upon full implementation of the plan. Phase II would complete the master plan for the basin, including preliminary designs, modeling, environmental review and permitting, and everything needed to begin property acquisition and final design.

FISCAL IMPACT

None. There is no match requirement for this grant funding.

RECOMMENDATION

The administration recommends that the City Council authorize the City Manager to accept funding offered by the Chehalis Basin Flood Authority for completion of the Flood Storage Basin Master Plan – Phase II by authorizing execution of Amendment #1 to RCO Agreement #19-1187.

SUGGESTED MOTION

I move that the City Council authorize the City Manager to accept funding offered by the Chehalis Basin Flood Authority for completion of the Flood Storage Basin Master Plan – Phase II by authorizing execution of Amendment #1 to RCO Agreement #19-1187.

**STATE OF WASHINGTON
RECREATION AND CONSERVATION OFFICE
AMENDMENT NO. 1
TO AGREEMENT NO. RCO #19-1187
CITY OF CHEHALIS**

PURPOSE

The purpose of this amendment is to add additional work items to the scope of work and increase the project budget.

Contract #19-1187 by and between the RECREATION AND CONSERVATION OFFICE (RCO) and CITY OF CHEHALIS is amended as follows:

STATEMENT OF WORK

CITY OF CHEHALIS shall provide the following services to RCO in support of the Chehalis River Basin Strategy, related to the Flood Storage and Habitat Enhancement Plan:

- Preliminary design of a flood storage basin to evaluate the feasibility of reducing the flood stages and the extent of flooded area in reaches of the Chehalis River upstream and downstream of the project.
- Coordination with the Office of Chehalis Basin regarding compliance with Executive Order 05-05 related to cultural resources consultation.
- Prepare Basin Inlet/Outlet Design Concepts.
- Perform hydraulic modeling to evaluate proposed basin storage volumes and quantify the reductions in flood stages in adjacent reaches of the Chehalis River.
- Perform iterative design process, including hydraulic modeling, to assess the impacts of the proposed flood storage basin.
- Prepare report documenting the flood storage basin design and the corresponding hydraulic analysis results. The report will include a discussion of the habitat restoration and enhancement opportunities associated with the project.
- 30% Design Flood Storage Basin Plans and Specifications
- Prepare Order of Magnitude Cost Estimates.

COMPENSATION

RCO shall reimburse CITY OF CHEHALIS an amount not to exceed three hundred sixteen thousand, six hundred seventy-five dollars, and fifty-three cents (**\$316,675.53**), including any applicable tax and indirect costs, for the performance of all things necessary for, or incidental to, the work as set forth in this Agreement.

Allowable costs shall include costs incurred from the first date of the Agreement period until the Agreement is terminated or expires as provided herein, but in no event shall allowable costs exceed the maximum amount of the Agreement. Costs allowable under this Agreement are based on the following agreed budget.

CITY OF CHEHALIS shall be allowed to move amounts not to exceed ten percent of any object or expenditure total between objects. However, no change or transfer can be made that would have the effect of increasing the total budget. Budget changes in excess of this ten percent may be made only upon the written approval of both parties to this Agreement.

CATEGORY	DOLLARS
Salaries and Wages	\$ 0.00
Goods and Services	\$ 316,675.53
Construction Contracts	\$ 0.00
TOTAL	\$ 316,675.53

PERIOD OF PERFORMANCE

This agreement will expire on **June 30, 2021**.

Effective Date

The effective date of this Amendment shall be upon completion of required signatures. In all other respects RCO #19-187, to which this is an Amendment, and attachments thereto, shall remain in full force and effect.

IN WITNESS WHEREOF, the parties hereby execute this Amendment.

Approved

CITY OF CHEHALIS
Assignee

Approved

State of Washington
RCO
Assignee

Signature

Signature

Print or Type Name

Scott Robinson
Print or Type Name

City Manager

Deputy Director

Title _____ Date _____

Title _____ Date _____

**CHEHALIS CITY COUNCIL MEETING
AGENDA REPORT**

TO: The Honorable Mayor and City Council

FROM: Jill Anderson, City Manager

BY: Trent Lougheed, Community Development Director

MEETING OF: September 23, 2019

SUBJECT: Engineering Services Agreement with Skillings Connolly, Inc., for the Flood Storage Basin Master Plan – Phase II Project

ISSUE

An engineering services agreement with Skillings Connolly, Inc., for the Flood Storage Basin Master Plan – Phase II Project is being presented for City Council’s review and approval.

DISCUSSION

The Office of the Chehalis Basin (OCB) approved the Chehalis Basin Flood Authority (FA) recommendation authorizing completion of the Flood Storage Basin Master Plan. The \$316,675.53 is intended to complete all items listed in the Scope of Work for completion of the plan.

The attached engineering services agreement with Skillings Connolly, Inc., (previous consultant utilized for Phase I, which has extensive expertise in environmental engineering) includes the following:

- Preliminary design of a flood storage basin to evaluate the feasibility of reducing the flood stages and the extent of flooded area in reaches of the Chehalis River upstream and downstream of the project.
- Coordination with the Office of Chehalis Basin regarding compliance with Executive Order 05-05 related to cultural resources consultation.
- Prepare Basin Inlet/Outlet Design Concepts.
- Perform hydraulic modeling to evaluate proposed basin storage volumes and quantify the reductions in flood stages in adjacent reaches of the Chehalis River.
- Perform iterative design process, including hydraulic modeling, to assess the impacts of the proposed flood storage basin.

- Prepare report documenting the flood storage basin design and the corresponding hydraulic analysis results. The report will include a discussion of the habitat restoration and enhancement opportunities associated with the project.
- 30% Design Flood Storage Basin Plans and Specifications
- Prepare Order of Magnitude Cost Estimates.

All work for the completion of the Flood Storage Basin Master Plan – Phase II Project will be completed by June 30, 2021.

FISCAL IMPACT

None. There is no match requirement for this grant funding.

RECOMMENDATION

The administration recommends that the City Council approve the engineering services agreement with Skillings Connolly, Inc., for an amount not to exceed \$316,675.53 to complete the Flood Storage Basin Master Plan – Phase II.

SUGGESTED MOTION

I move that the City Council approve the engineering services agreement with Skillings Connolly, Inc., for an amount not to exceed \$316,675.53 to complete the Flood Storage Basin Master Plan – Phase II.

Formal Task Assignment Document

SC Project No. 15070

Task No. 15

The general provisions and clauses of the On-call Agreement shall be in full force and effect for this Task Assignment.

Project Title:

For the purposes of this Task Assignment, the Project Title shall be called, "Flood Storage Master Plan – Phase 2 Completion". Skillings Connolly, Inc. will provide the services as outlined on Exhibit A, attached, and by this reference is hereby made part of this Task Order.

Maximum Amount Payable:

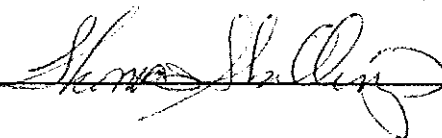
The amount payable under this task assignment will not exceed **\$316,675.53**.

Current Phase 2 Task Order Cost: \$316,675.53

Time for Completion: June 30, 2021.

Agency Project Manager Signature: _____ Date: _____

Oral Authorization: _____ Date: _____

Consultant Signature:  _____ Date: 9/20/2019

Agency Approving Authority: _____ Date: _____

EXHIBIT A
PHASE 2 COMPLETION SCOPE OF WORK

Prepared for:

CITY OF CHEHALIS
FLOOD STORAGE MASTER PLAN PROJECT

September 20, 2019

Skillings Connolly, Inc. (Consultant) completed a Preliminary Feasibility Study in June 2019 for Preliminary Phase 2 of the Flood Storage Master Plan project. This scope of work for Phase 2 completion describes the work that will continue from the point where the Preliminary Phase 2 work ended. The project is located in the City between the Chehalis River and Louisiana Ave., south of Airport Road and north of Highway 6, an area of about 150 acres. **The objective of the Phase 2 completion work is to further develop a project design that is shown by the hydraulic model of the Chehalis River, to reduce the flood stage upstream and downstream of the project, at a range of discharges.**

Description of Phases

Phase 1 – This initial work proposed a 10-acre storage basin. River modeling results revealed the site was too small to provide meaningful flood mitigation benefits.

Preliminary Phase 2 – This phase was an early start of work with the purpose of evaluating a storage basin larger than the Phase 1 basin and adjacent to the Chehalis River at the 150-acre site described above. A preliminary conceptual storage basin was simulated with a RiverFlow 2D hydraulic model in this phase. The model results showed that the proposed phase 2 design will reduce flood levels both upstream and downstream from the project site during the 100-year flood but will increase peak downstream flood levels during some smaller events including the 2-year flood. Downstream impacts were the result of increased conveyance through the project reach due to flow shortcutting a meander bend at the downstream end of the site. The Phase 2 study concluded the extent of the flood mitigation benefits is sensitive to the storage basin's inlet and outlet design parameters. The Phase 2 Preliminary Feasibility study concluded the basin design needs to be refined in order to design a project that will maximize the effectiveness of additional flood storage on the site.

Phase 2 Completion – Phase 2 described in this Scope of Work, will pick up where Preliminary Phase 2 left off. The basin design will be further refined by adjusting the size and shape of the excavated area to limit shortcutting of the river flow through the existing channel meander bend. The storage basin area will be designed to include features such as higher banks, berms, inlet and outlet structures to limit conveyance increases and allow targeted use of floodplain storage to maximize flood benefits. The storage basin Inlet and outlet structures will be analyzed to control the flow into and out of the basin. The modified design will be simulated with the RiverFlow 2D model at the 2-year and 100-year flood events to evaluate the flood mitigation benefit achieved by these modifications. River modeling will be provided by Watershed Science and Engineering.

While the primary purpose of the project is flood mitigation, it is anticipated the Phase 2 completion project will also include the design of wetland and fish habitat, the inclusion of interpretative trails for recreation areas during times the basin is not being used for flood mitigation. Parking lot(s) will be included along with interpretive signing.

The objective of the work effort outlined above is to provide a conceptual flood storage facility. The design will be an iterative process which will include the development of a concept design, followed by river modeling to assess the impacts, positive or negative, of the proposed flood storage mitigation. For purposes of budgeting, this scope of work assumes up to four (4) basin design scenarios, each followed by a river model simulation of the 2- and 100-year flood events. One additional model run will be performed to test the expected results of the model.

At this time, it is unknown how many iterations it will take to complete a basin design concept that achieves the project objective. If the selection can be made in less than 4 basin design scenarios budget will remain to complete additional tasks presently shown in this scope of work as "Implementation Phase". If budget is available the next task to be included in the Phase 2 budget will be selected in the following order of priority:

Phase 2 Completion

- 1) Task 70 Preliminary Habitat Enhancement and Interpretive Area plans.
- 2) Task 50 Dam Safety Requirements

Implementation Phase

- 3) Task 80 Existing and Proposed Utilities
- 4) Task 100 Environmental Impact Mitigation
- 5) Public Involvement/Public Outreach
- 6) Property Acquisition

Once the modeling proves a concept will achieve the project objective, the Flood Storage Project design will be advanced to an approximate 30% concept design level with sufficient detail to prepare the environmental check list document. Over the shoulder review with the City will occur before the project design progresses beyond the 30% design level. The anticipated deliverable will also include a Master Plan document showing feature plans, opportunities, order of magnitude cost estimates and potential phasing.

Future Phases of the project will include the completion of a more advanced environmental document should the environmental check list review determine the need for either an MDNS or EIS document. Future phases will also include an agreement to develop property acquisition activities and construction plans.

Assumptions

- This scope of work includes work elements for Phase 2 as budget allows. The priority tasks are to design a project that meets the objective stated in bold text on Page 2.
- Completion of the Phase 2 Flood Storage Master Plan Project will have a duration through June 30, 2021.

PHASE 2 COMPLETION TASKS

Task 10 Project Management

Project Management includes the day to day coordination and management of the project to assure adequate resources are made available and the schedule and budget are consistent with the contract documents.

Assumptions:

- Correspondence with the client will be through emails, phone calls and periodic one-on-one meetings.
- It is assumed there will be 5 face-to-face status meetings in Chehalis.

Tasks:

1. Peer/Principal QA/QC review
2. Progress Reports/Invoicing
3. Project scheduling
4. Status meetings with client
5. In-house team coordination meetings, biweekly
6. Coordination with sub- consultants
7. Project management and coordination

Deliverables:

- Monthly invoices and earned value reports
- Meeting minutes from client coordination meetings

Task 20 Flood Storage Basin – Preliminary Design with Inlet/Outlet Design

This phase of work will prepare proposed project designs (alternates) until a design is shown by the river modeling to provide a flood benefit during the 100-year flood and the 2-year flood. WSE will update the river model to represent the proposed project, run the model to simulate the 2-year and 100-year flood events, and compare results to baseline conditions to evaluate project water surface impacts. The alternates will be modeled to estimate the level of benefit at the various flood stage events. It is anticipated this will be an iterative process. The Consultants will prepare a concept design and then model the design to determine the impacts to the flood stage.

Assumptions:

- The City has reviewed and approved the Preliminary Phase 2 concept documents in the Preliminary Feasibility Study and approve of the direction for Phase 2 completion.
- Watershed Science and Engineering (WSE) will provide the modeling for impacts of the proposed flood mitigation facility.
- Only those proposed designs that provide a reduction in the flood stage both up-river and down-river will be considered to advance to the 30% design level and for environmental evaluation.

- Existing 6-month, 2-year and 100-year flood stage elevations will be as established by USGS gages on the Chehalis River.
- The proposed facility design will be tested for the 2-year, 100-year and one additional flood stage scenario.
- It is assumed there will be only four (4) each, model simulations for the 2 and 100-year flood events for a total of 8, plus one additional model run for an additional flood stage test.
- Inlet and outlet designs were not included in the last phase of the project design, but will be included in the design and modeling for this phase.
- Outlet designs will be designed for fish passage.

Tasks:

Model Run: A

A Preliminary design of a storage basin was modeled in Preliminary Phase 2. The results showed that this basin design would result in a reduction of the flood stage of a 100-year flood event, but also resulted in a small increase in the downstream flood event for a 2-year flood event. Model Run A will pick up where the Preliminary Phase 2 work ended. The basin design proposed for Model Run A will be further refined by adjusting the size and shape of the excavated area to limit shortcutting of the river flow through the existing channel meander bend as was evidenced in the Preliminary Phase 2 river model results.

1. Prepare a Civil 3D model and calculate excavation and storage volumes using Civil 3D for the proposed basin design.
2. Prepare proposed basin cross sections.
3. Prepare a profile of the proposed flowline of the proposed basin from the inlet to the outlet.
4. Research alternative methods for inlet and outlet controls for the proposed flood storage basin.
5. Provide potential methods for inlet and outlet control to include:
 - a. Sketches
 - b. Sizes and locations.
 - c. Analysis at a range of flows within the Chehalis River channel.
 - d. Hydraulic modeling analysis in Task 40 to include the inlet and outlet designs.

Model Run: B

The results of Model Run A will influence the proposed basin design for Model Run B. It is too soon to outline a design description; however, the approach will be to try a different design if the results from Model Run A does not meet the objective.

1. Prepare a Civil 3D model and calculate excavation and storage volumes using Civil 3D for the proposed basin design.
2. Prepare proposed basin cross sections.
3. Prepare a profile of the proposed flowline of the proposed basin from the inlet to the outlet.
4. Research alternative methods for inlet and outlet controls for the proposed flood storage basin.
5. Provide discussion of potential methods for inlet and outlet control to include:

- a. Sketches
- b. Sizes and locations.
- c. Analysis at a range of flows within the Chehalis River channel.
- d. Hydraulic modeling analysis in Task 40 to include the inlet and outlet designs.

Model Run: C

The results of earlier model runs will be reviewed if the objective has not been achieved. Consultation with WSE to discuss potential design refinements to maximize project benefits and eliminate unacceptable impacts will be essential to selecting the design for the next model run.

1. Prepare a Civil 3D model and calculate excavation and storage volumes using Civil 3D for the proposed basin design.
2. Prepare proposed basin cross sections.
3. Prepare a profile of the proposed flowline of the proposed basin from the inlet to the outlet.
4. Research alternative methods for inlet and outlet controls for the proposed flood storage basin.
5. Provide discussion of potential methods for inlet and outlet control to include:
 - a. Sketches
 - b. Sizes and locations.
 - c. Analysis at a range of flows within the Chehalis River channel.
 - d. Hydraulic modeling analysis in Task 40 to include the inlet and outlet designs.

Model Run: D

The results of earlier model runs will be reviewed if the objective has not been achieved. Consultation with WSE to discuss potential design refinements to maximize project benefits and eliminate unacceptable impacts will be essential to selecting the design for the next model run.

Tasks

1. Prepare a Civil 3D model and calculate excavation and storage volumes using Civil 3D for the proposed basin design.
2. Prepare proposed basin cross sections.
3. Prepare a profile of the proposed flowline of the proposed basin from the inlet to the outlet.
4. Research alternative methods for inlet and outlet controls for the proposed flood storage basin.
5. Provide discussion of potential methods for inlet and outlet control to include:
 - a. Sketches
 - b. Sizes and locations.
 - c. Analysis at a range of flows within the Chehalis River channel.
 - d. Hydraulic modeling analysis in Task 40 to include the inlet and outlet designs.

Task 30 Preferred Basin Design – Draft Report and Conclusion

1. Review the preferred basin design with Watershed Science and Engineering (WSE) to quantify the flood benefit objective.
2. Prepare report summarizing preferred project and the flood benefits.
3. Review hydraulic modeling results and preliminary improvement plans showing design concept, **with City** to obtain comments, approval and direction on the preferred project.

Deliverables:

- Preliminary Plan, profile and cross sections of the proposed flood storage basin design.
- .xml file of proposed basin surface in format acceptable for the hydraulic river model.
- Volume Calculations
- Report outlining:
 1. Potential alternatives for inlet and outlet controls.
 2. Flood benefit of inlet and outlet control alternatives.
 3. Description of flood storage operation and maintenance for all options and alternatives.

Task 40 Hydraulic Analysis of Options and Alternatives

Watershed Science & Engineering (WSE) will complete hydraulic modeling and analysis to support the design of a project to increase flood storage at the City of Chehalis (City) wastewater treatment plant (WWTP) property along the Chehalis River in Chehalis, WA. The project includes removing existing buildings and excavating in-situ material to increase available on-site flood storage with the goal of reducing Chehalis River flood levels both upstream and downstream of the project site.

WSE will update and run an existing two-dimensional (2D) hydraulic model of the Chehalis River to evaluate hydraulic impacts and flood benefits of the proposed project and up to three (3) design alternatives. Project design information will be provided to WSE by Skillings Connolly for incorporation into the hydraulic model. Specific tasks to be completed by WSE include:

Assumptions:

- The potential for groundwater or rainwater to partially fill the flood storage area will not be considered, thus assuming that the full volume of the excavated area will be available for flood storage.
- A model simulation to evaluate any change to the project design will constitute a design iteration. This may include simulating a single change or combination of changes to the proposed ground surface, storage area extents, berm alignment and height, configuration of flow inlet and outlet structures, or other project features.
- The final design alternative will seek to demonstrate flood benefit during the 100-year flood without causing negative flood impacts during the 2-year flood event.

Tasks:

1. Hydraulic Analysis of Preliminary Design

The existing RiverFlow2D hydraulic model of the Chehalis River will represent baseline conditions for comparison of project impacts. WSE will truncate the model downstream of Grand Mound and upstream of Adna to remove areas that will not be impacted by the proposed project and to reduce model computation time. To trim the model WSE will:

- a. Add flux lines to the existing model at the new upstream and downstream model boundaries.
- b. Run the model to simulate the 2-year and 100-year flood events
- c. Trim the model mesh to remove areas beyond the new boundary locations
- d. Apply new model boundary conditions based on simulated results at the boundary flux lines.
- e. Compare results to the full existing condition model to verify results

WSE will then update the model to represent the proposed project, run the model to simulate the 2-year and 100-year flood events, and compare results to baseline conditions to evaluate project water surface impacts. WSE will present results to Skillings Connolly and the City and discuss potential design refinements to maximize project benefits and eliminate unacceptable impacts. WSE will update the model to represent the initial project design and up to four (4) design alternatives. For each design evaluated WSE will:

1. Create a with-project model by updating the existing condition model geometry to represent proposed project ground conditions. The initial project design will include berms around the project site with flow inlets and outlets to provide a hydraulic connection between the flood storage area and the Chehalis River. Geometry for project design will be based on ground surface topography (LandXML) and storage area inlet and outlet structure locations and characteristics provided by Skillings Connolly.
2. Run the with-project model to simulate the 2-year and 100-year flood events.
3. Compare peak water surface elevations under the with-project configuration with baseline conditions to determine peak water surface impacts at the WWTP location and in adjacent reaches of the Chehalis River.

4. Participate in an online meeting with Skillings Connolly and the City to present results of the hydraulic analysis and to discuss potential design modifications that should be considered for the subsequent design iteration.

Assumptions:

- The potential for groundwater or rainwater to partially fill the flood storage area will not be considered, thus assuming that the full volume of the excavated area will be available for flood storage.
- A model simulation to evaluate any change to the project design will constitute a design iteration. This may include simulating a single change or combination of changes to the proposed ground surface, storage area extents, berm alignment and height, configuration of flow inlet and outlet structures, or other project features.
- The final design alternative will seek to demonstrate flood benefit during the 100-year flood without causing negative flood impacts during the 2-year flood event.

2. Project Impacts Figures and Documentation

For each project design evaluated (initial design plus up to three iterations) WSE will prepare a brief e-mail summary to document the simulation results. The summary will include figures showing water surface impacts along the project site and extending downstream to Mellen Street and upstream to the confluence with the Newaukum River.

At the conclusion of the modeling and analysis, WSE will prepare a brief letter report to document the methods and results of the investigation and to present results of the preferred design model runs for the 2-year and 100-year flood event; or, if a preferred alternative is not identified, summarizing results of the 5 alternatives.

3. Meetings

WSE will participate in up to five (5) online meetings to present evaluation results and discuss design alternatives as well as one (1) one in-person meeting in Chehalis.

4. Project Administration

WSE will conduct project administration activities including regular coordination with the Skillings Connolly project manager and preparing monthly invoices.

Task 50 Dam Safety Requirements

Assumptions:

- Washington State Department of Ecology Dam Safety Office has jurisdiction of flood control projects that store 10 Acre-feet or more of water
- DOE jurisdiction comes from the Flood Control Act (1935) RCW 86.16
- A construction permit from DOE is required; the permit requires:
 - DOE approval of the project plans and specifications
 - DOE approval of a Construction Inspection Plan
- DOE will also require:
 - An Operation and Maintenance Plan
 - An Emergency Action Plan

Tasks:

1. Coordinate with the City and DOE Dam Safety office on required documents
2. Submit plans and specifications for DOE review and approval
3. Prepare Construction Inspection Plan
4. Prepare Operation and Maintenance Plan
5. Prepare Emergency Action Plan

Deliverables:

- Plans and specifications acceptable to DOE Dam Safety Office
- Construction Inspection Plan
- Operation and Maintenance Plan
- Emergency Action Plan

Task 60 30% Design - Flood Storage Plans and Specifications

Assumptions:

- Once the City has approved the preferred design concept of the flood storage basin, inlet and outlet design which the hydraulic model has simulated and shown to provide a flood benefit, then the 30% Plans and Specifications will be prepared to complete the following tasks.
- **Model Test Run** – the purpose of this model run is to validate and predict the performance of the model. A final model test run will be performed on a variation to the preferred design to see if the model produces results as predicted.

Tasks

1. Prepare 30% improvement plans for the flood storage basin and inlet/outlet structures to use in the City's Public Involvement/Public Outreach Task 140.
2. Utilize the 30% design plans and specifications to begin discussion and preliminary review with the permitting agencies listed in the Phase 2 Feasibility Study.
3. Perform final River Model Test Run.

Deliverables:

- 30% Plans and specifications for the flood storage basin and inlet/outlet structures
 - Plan view showing proposed improvements.
 - Profile of proposed basin berm.
 - Inlet/Outlet design details
- Technical Memorandum – Model Test Run Summary

Task 70 Preliminary Habitat Enhancement and Interpretive Area plans

Assumptions:

- The City plans to use the project site as an opportunity for public use and understanding of area habitats
- Future phases of the project will determine the type and amount of environmental mitigation required. The Interpretive Area may be a possible opportunity to obtain Environmental mitigation credit.
- A small parking area is desired
- Interpretive trails and signing are desired
- Restrooms are not included
- Interpretive parking, trails, and signing may be inundated during Chehalis River flooding

Tasks:

1. Develop preliminary design showing location, scale and content of proposed Interpretive Area.
2. Provide alternative phase designs for park features
3. Provide parking plan for up to ten (10) cars, show proposed location.
4. Show possible trail route, length and location within project area.
5. Develop interpretive sign ideas and plans.

Deliverables:

- Preliminary parking, trail, and interpretive signing plans
- Prepare exhibits showing possible alternatives for City and public review.

IMPLEMENTATION PHASE TASKS

The estimated hours for the Implementation Phase tasks are estimated in the table on page 23. The estimated hours are based on the current stage of the project design. Once the project design is selected and the 30% design improvement plans are complete, a more accurate estimation of the hours needed to complete the Implementation tasks will be made at that time.

Task 80 Existing and Proposed Utilities

Assumption:

- City will provide as-built utility maps.
- Existing wells within the flood storage area will need to be capped per DOE regulations.
- Parking and interpretive area will not be illuminated.

Tasks:

1. Provide an overview of the existing utilities (water, sewer, drainage, septic, CTV, power, gas, etc.) to determine which will be removed, relocated or replaced.
2. Determine need for new utilities to serve proposed flood storage facility
3. Prepare plans for utilities work in staging alternatives.

Deliverables:

- List of utilities that are affected.
- Plans for utilities work in staging alternatives.
- As-built utility locations.

Task 90 Prepare Order of Magnitude Cost Estimates

Assumptions:

- Preliminary Order of Magnitude Cost estimates will be prepared for:
 - The flood storage basin design concept that meets the project objective and was concurred by the City.
 - The inlet and outlet structures
 - Interpretive area parking, trails, signing

Tasks:

1. Calculate berm excavation and embankment quantities and cost.
2. Prepare order of magnitude cost estimate for the inlet and outlet structures.

3. Prepare estimate for:
 - a. abandonment of existing utilities,
 - b. demolition of buildings and roads,
 - c. excavation and construction of dikes,
 - d. flood control inlet/outlet controls and equipment,
 - e. interpretive area parking, trails, and signing.

Deliverables:

- Detailed Preliminary Cost Estimate for:
 - Flood storage basin construction.
 - Inlet and outlet construction.
 - Interpretive area parking, trails, signing construction.

Task 100 Environmental Impact Mitigation

Assumptions:

- This Task will only be required if the City determines there are significant environmental impacts that must be mitigated, including impacts to Waters of the United States. Waters of the United States includes special aquatic areas as defined by Section 404 of the Clean Water Act.
- Proposed mitigation will be conceptual in nature, but at a high enough level to support future permitting with the U.S. Army Corps of Engineers, Department of Ecology, and WDFW. Mitigation planning will not include final PS&E at this time.
- It is assumed that environmental impacts will be associated with proposed disturbance of aquatic resources, which will require mitigation in the form of stream/riparian area enhancement and wetland mitigation.
- Mitigation Plan prepared under this task will be used in support of SEPA review and will be submitted with the SEPA Checklist.
- Data from the Environmental Screening completed in Phase 2 will be used for this Task

Tasks:

1. For any impact determined significant (refer to Preliminary Phase 2 Environmental Screening) prepare a mitigation plan(s).
 - a. Meet with City staff and affected stakeholders on-site to determine viable mitigation options.
 - b. Prepare Mitigation Plan
2. Review with City for agreement/acceptance
3. Coordinate/consult with resource agencies for their agreement/acceptance of the mitigation plan(s), including the Chehalis Tribe

Deliverables:

- Mitigation plans for significant impacts

Task 110 Public Involvement/Public Outreach

Assumptions:

- Public meetings will be required for presentaion of SEPA documentation.
- City may desire to present project plans to public
- There will be project presentations to the City Council
- Firm will not complete this task unless authorized, along with Task 130 (EIS), by the City. This task can be utilized for project outreach in general, but is described here to highlight the level of Public outreach necessary to complete the SEPA or future EIS process.

Tasks:

1. Set up public outreach/public outreach program with City
2. Prepare for and attend public meetings and other meetings with City and City Council (up to 10)
3. Provide project display boards for public meeting, up to ten (10)
4. Assist client with providing materials for City web site

Deliverables:

- Public outreach program with City cooperation
- Attendance at ten (10) public or City Council meetings
- Display boards for public meeting, up to ten (10)
- Project materials for City web site
- Memorandum of public outreach/public outreach program

Task 120 Property Acquisition

Assumptions:

- It is preferred to follow the US Uniform relocation Act for property acquisitions and relocations to preserve the future ability to utilize federal funds

- City intends to purchase private properties within the project site; probably in stages to match staging alternatives
- All acquisitions will be total takes, relocations will be required
- Property acquisition and relocation assistance services will be provided by Tierra Right of Way Services (Tierra)
-

Tasks:

1. Determine properties required for each staging alternative
2. City to provide current property owner contacts
3. City to provide current title reports
4. Tierra will provide:
 - a. Property appraisals to include cost of relocations
 - b. Appraisal reviews
 - c. Offer letters for City review and signature
 - d. Negotiation services including recommendations for administrative settlements to City
 - e. Signed negotiation packets to City for payment
 - f. Transfer of ownership recording
 - g. Relocation assistance including recommendations for administrative settlements to City
 - h. Notice to City relocation has been completed and payment due

Deliverables:

- Acquisition plans and legal descriptions
- Property acquisition and relocation services

Task 130 Environmental Permitting
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Assumptions:

- An appropriate SEPA document has been acted upon by the City
- Environmental permits may be obtained for the total project or for individual stages depending on resource agency requirements

Tasks:

1. Prepare total project JARPA for USCAE Clean Air Act Section 401 and 404 permits, City to submit
2. Prepare cultural resources documentation for City submittal to DAHP
3. Prepare Hydraulic Permit Approval for City submittal to WSDFW
4. DRAFT Shoreline Substantial Development Permit for City review and approval

Deliverables:

- JARPA for City submittal
- Cultural resources documentation for City submittal
- HPA documentation for City submittal
- DRAFT Shoreline Substantial Development Permit for City review and approval

END SCOPE OF WORK

EXHIBIT B-1

CONSULTANT COST COMPUTATION – MAN-HOURS

PROJECT NO. 15070-TASK NO. 15 CITY OF CHEHALIS FLOOD STORAGE MASTER PLAN PROJECT-PHASE 2 COMPLETION		PRINCIPAL-IN-CHARGE	PROJECT MANAGER	PROJECT ENGINEER	ENVIRONMENTAL MANAGER	SR ENVIRONMENTAL SCIENTIST	PROJECT SCIENTIST	STAFF SCIENTIST	ENGINEER	SENIOR TECHNICIAN	PROJECT ADMINISTRATOR
TASK #	TASK DESCRIPTION										
	PHASE 2 COMPLETION TASKS										
10	PROJECT MANAGEMENT										
1	Peer/Principal QA/QC review.	40									
2	Progress Reports/Invoicing.		12								20
3	Project scheduling.		4	16							
4	Status meetings with Client.		15								
5	In-house team coordination meetings, bi-weekly.		20	20	8						
6	Coordination with subconsultants		40								4
7	Project management and coordination.		20	20							3
20	FLOOD STORAGE BASIN - PRELIMINARY DESIGN										
Model A											
1	Prepare a Civil 3D model and calculate excavation and storage volumes using Civil 3D for the proposed basin design.	4	8	11						40	
2	Prepare proposed basin cross sections.		2							40	
3	Prepare a profile of the proposed flowline of the proposed basin from the inlet to the outlet.		2							24	
4	Research alternative methods for inlet and outlet controls for the proposed flood storage basin.		10						40		
5	Provide potential methods for inlet and outlet control to include:		10	8							
a.	Sketches.								8		
b.	Sizes and location.								4		
c.	analysis at a range of flows within the Chehalis River channel.		2	2							

PROJECT NO. 15070-TASK NO. 15 CITY OF CHEHALIS FLOOD STORAGE MASTER PLAN PROJECT-PHASE 2 COMPLETION		PRINCIPAL-IN-CHARGE	PROJECT MANAGER	PROJECT ENGINEER	ENVIRONMENTAL MANAGER	SR ENVIRONMENTAL SCIENTIST	PROJECT SCIENTIST	STAFF SCIENTIST	ENGINEER	SENIOR TECHNICIAN	PROJECT ADMINISTRATOR
TASK #	TASK DESCRIPTION										
d.	Hydraulic modeling analysis in Task 50 to include the inlet and outlet designs.		4								
Model B											
1	Prepare a Civil 3D model and calculate excavation and storage volumes using Civil 3D for the proposed basin design.	4	8	11						40	
2	Prepare proposed basin cross sections.		2							40	
3	Prepare a profile of the proposed flowline of the proposed basin from the inlet to the outlet.		2							24	
4	Research alternative methods for inlet and outlet controls for the proposed flood storage basin.		10						40		
5	Provide discussion of potential methods for inlet and outlet control to include:		10	8							
a.	Sketches.								8		
b.	Sizes and location.								4		
c.	analysis at a range of flows within the Chehalis River channel.		2	2							
d.	Hydraulic modeling analysis in Task 50 to include the inlet and outlet designs.		4								
Model C											
1	Prepare a Civil 3D model and calculate excavation and storage volumes using Civil 3D for the proposed basin design.	4	8	11						40	
2	Prepare proposed basin cross sections.		2							40	
3	Prepare a profile of the proposed flowline of the proposed basin from the inlet to the outlet.		2							24	
4	Research alternative methods for inlet and outlet controls for the proposed flood storage basin.		10						40		

PROJECT NO. 15070-TASK NO. 15 CITY OF CHEHALIS FLOOD STORAGE MASTER PLAN PROJECT-PHASE 2 COMPLETION		PRINCIPAL-IN-CHARGE	PROJECT MANAGER	PROJECT ENGINEER	ENVIRONMENTAL MANAGER	SR ENVIRONMENTAL SCIENTIST	PROJECT SCIENTIST	STAFF SCIENTIST	ENGINEER	SENIOR TECHNICIAN	PROJECT ADMINISTRATOR
TASK #	TASK DESCRIPTION										
5	Provide discussion of potential methods for inlet and outlet control to include:		10	8							
a.	Sketches.								8		
b.	Sizes and location.								4		
c.	analysis at a range of flows within the Chehalis River channel.		2	2							
d.	Hydraulic modeling analysis in Task 50 to include the inlet and outlet designs.		4								
Model D											
1	Prepare a Civil 3D model and calculate excavation and storage volumes using Civil 3D for the proposed basin design.	4	8	11						40	
2	Prepare proposed basin cross sections.		2							40	
3	Prepare a profile of the proposed flowline of the proposed basin from the inlet to the outlet.		2							24	
4	Research alternative methods for inlet and outlet controls for the proposed flood storage basin.		10	8					40		
5	Provide discussion of potential methods for inlet and outlet control to include:		10	8							
a.	Sketches.								8		
b.	Sizes and location.								4		
c.	analysis at a range of flows within the Chehalis River channel.		2	2							
d.	Hydraulic modeling analysis in Task 50 to include the inlet and outlet designs.		4								
30	Proposed Basin Design										
1	Review the preferred proposed basin design with Watershed Science and Engineering (WSE), quantify the flood benefit objective.		4							20	

PROJECT NO. 15070-TASK NO. 15 CITY OF CHEHALIS FLOOD STORAGE MASTER PLAN PROJECT-PHASE 2 COMPLETION		PRINCIPAL-IN-CHARGE	PROJECT MANAGER	PROJECT ENGINEER	ENVIRONMENTAL MANAGER	SR ENVIRONMENTAL SCIENTIST	PROJECT SCIENTIST	STAFF SCIENTIST	ENGINEER	SENIOR TECHNICIAN	PROJECT ADMINISTRATOR
TASK #	TASK DESCRIPTION										
2	Prepare report summarizing selected proposed preferred project and the flood benefits.	8	60						40	12	
3	Review hydraulic modeling results and preliminary improvement plans showing selected design concept, with City to obtain comments, approval and direction on the proposed project.	4	4								
40	HYDRAULIC ANALYSIS OF OPTIONS AND ALTERNATIVES	WATERSHED SCIENCE & ENGINEERING SUBCONSULTANT TASKS SEE HOURS IN EXHIBIT E									
1	Hydraulic Analysis of Preliminary Design.										
a	Add flux lines to the existing model at the new upstream and downstream model boundaries.										
b	Run the model to simulate the 2-year and 100-year flood events.										
c	Trim the model mesh to remove areas beyond the new boundary locations.										
d	Apply new model boundary conditions based on simulated results at the boundary flux lines.										
e	Compare results to the full existing condition to verify results.										
i	WSE will update the model to represent proposed project, run the model to simulate the 2-year and 100- year flood events, and compare results to baseline conditions to evaluate project water surface impacts.										
ii	WSE will update the model to represent the initial project design and up to three (3) design alternatives. For each design evaluated WSE will:										

PROJECT NO. 15070-TASK NO. 15 CITY OF CHEHALIS FLOOD STORAGE MASTER PLAN PROJECT-PHASE 2 COMPLETION		PRINCIPAL-IN-CHARGE	PROJECT MANAGER	PROJECT ENGINEER	ENVIRONMENTAL MANAGER	SR ENVIRONMENTAL SCIENTIST	PROJECT SCIENTIST	STAFF SCIENTIST	ENGINEER	SENIOR TECHNICIAN	PROJECT ADMINISTRATOR
TASK #	TASK DESCRIPTION										
a	Create a with-project model by updating the existing condition model geometry to represent proposed project ground conditions. Geometry for project design will be based on ground surface topography (LandXML) and storage area inlet and outlet structure locations and characteristics provided by Skillings Connolly.										
b	Run the with-project model to simulate the 2-year and 100- year flood events.										
c	Compare peak water surface elevations under the with-project configuration with baseline conditions to determine peak water surface impacts at the WWTP location and in adjacent reaches of the Chehalis River.										
d	Participate in an online meeting with Skillings Connolly and the City to present results of the hydraulic analysis and to discuss potential design modifications that should be considered for the subsequent design iteration.										
2	Project Impacts Figures and Documentation										
a	For each project design evaluated (initial design plus up to three iterations) WSE will prepare a brief email summary to document the simulations results. The summary will include figures showing water surface impacts along with the project site and extending downstream to Mellen Street and upstream to the confluence with the Newaukum River.										

PROJECT NO. 15070-TASK NO. 15 CITY OF CHEHALIS FLOOD STORAGE MASTER PLAN PROJECT-PHASE 2 COMPLETION		PRINCIPAL-IN-CHARGE	PROJECT MANAGER	PROJECT ENGINEER	ENVIRONMENTAL MANAGER	SR ENVIRONMENTAL SCIENTIST	PROJECT SCIENTIST	STAFF SCIENTIST	ENGINEER	SENIOR TECHNICIAN	PROJECT ADMINISTRATOR
TASK #	TASK DESCRIPTION										
b	WSE will prepare a brief letter report to document the methods and results of the investigation and to present results of the 4 alternatives.										
3	Meetings										
a	WSE will participate in up to four (4) online meetings to present evaluation results and discuss design alternatives as well as one (1) in-person meeting in Chehalis.										
4	Project Administration										
a	WSE will conduct project administration activities including regular coordination with the Skillings Connolly project manager and preparing monthly invoices.										
50	DAM SAFETY REQUIREMENTS										
1	Coordinate with the City and DOE Dam Safety office on required documents.		2	4					4		
2	Submit plans and specifications for DOE review and approval.		16	24							
3	Prepare Construction Inspection Plan.		4	8					16		
4	Prepare Operation and Maintenance Plan.		4	8					16		
5	Prepare Emergency Action Plan.		4	8						24	
60	30% DESIGN - FLOOD STORAGE PLANS AND SPECIFICATIONS										
1	Prepare 30% improvement plans for the flood storage basin and inlet/outlet structures to use in the City's Public Involvement/Public Outreach Task 140.	4	21	80					40		
2	Utilize the 30% design plans and specifications to begin discussion and preliminary review with the permitting agencies listed in the prior phase of the project.			4	4	8			16		
3	Perform final River Model Test Run.			16					40		

PROJECT NO. 15070-TASK NO. 15 CITY OF CHEHALIS FLOOD STORAGE MASTER PLAN PROJECT-PHASE 2 COMPLETION		PRINCIPAL-IN-CHARGE	PROJECT MANAGER	PROJECT ENGINEER	ENVIRONMENTAL MANAGER	SR ENVIRONMENTAL SCIENTIST	PROJECT SCIENTIST	STAFF SCIENTIST	ENGINEER	SENIOR TECHNICIAN	PROJECT ADMINISTRATOR
TASK #	TASK DESCRIPTION										
70	PRELIMINARY HABITAT ENHANCEMENT AND INTERPRETIVE AREAS PLANS										
1	Develop preliminary design showing location, scale and content of proposed Interpretive Area.		4	8	8		8				
2	Provide alternative phase designs for park features.			2			8				
3	Provide parking plan for up to ten (10) cars, show proposed location.			2							
4	Show possible trail route, length and location within project area.		4	8	8		8				
5	Develop interpretive sign ideas and plans.			8			8				
80	IMPLEMENTATION PHASE TASKS										
80	EXISTING AND PROPOSED UTILITIES										
1	Provide an overview of the existing utilities (water, sewer, drainage, septic, CTV, power, gas, etc.) to determine which will be removed, relocated, or replaced.		2	8					16		
2	Determine need for new utilities to serve proposed flood storage facility.			8					16		
3	Prepare plans for utilities work in staging alternatives.			8					24		
90	PREPARE ORDER OF MAGNITUDE COST ESTIMATES										
1	Calculate berm excavation and embankment quantities and cost.	2	8							8	
2	Prepare order of magnitude cost estimate for the inlet and outlet structures.		8								
3	Prepare estimate for:										
a	Abandonment of existing utilities.		2						8		
b	Demolition of buildings and roads.		2						8		
c	Excavation and construction of dikes.		2						8		

PROJECT NO. 15070-TASK NO. 15 CITY OF CHEHALIS FLOOD STORAGE MASTER PLAN PROJECT-PHASE 2 COMPLETION		PRINCIPAL-IN-CHARGE	PROJECT MANAGER	PROJECT ENGINEER	ENVIRONMENTAL MANAGER	SR ENVIRONMENTAL SCIENTIST	PROJECT SCIENTIST	STAFF SCIENTIST	ENGINEER	SENIOR TECHNICIAN	PROJECT ADMINISTRATOR
TASK #	TASK DESCRIPTION										
d	Flood control inlet/outlet controls and equipment.		4						16		
e	Interpretive area parking, trails, and signing.		4	2			8		8		
100	ENVIRONMENTAL IMPACT MITIGATION										
1	For any impact determined significant from Task 110 prepare a mitigation plan(s).				8	24					
a	Meet with City staff and affected stakeholders on-site to determine viable mitigation options.				4	4					
b	Prepare Mitigation Plan.				4	20	40				
2	Review with city for agreement/acceptance.					4	4				
3	Coordinate/consult with resource agencies for their agreement/acceptance of the mitigation plan(s), including the Chehalis Tribe			16	16	16					
110	PUBLIC INVOLVEMENT/PUBLIC OUTREACH										
1	Set up public outreach/public outreach program with City.										
2	Prepare for and attend public meetings and other meetings with City and City Council (up to 10).	20	30		30						
3	Project display boards for public meeting, up to ten (10).						40				
4	Assist Client with providing materials for City website.								40		
120	PROPERTY ACQUISITION (BY SUBCONSULTANT)										
1	Determine properties required for each staging alternative.										
2	City to provide current property owner contacts.										
3	City to provide current title reports.										

PROJECT NO. 15070-TASK NO. 15 CITY OF CHEHALIS FLOOD STORAGE MASTER PLAN PROJECT-PHASE 2 COMPLETION		PRINCIPAL-IN-CHARGE	PROJECT MANAGER	PROJECT ENGINEER	ENVIRONMENTAL MANAGER	SR ENVIRONMENTAL SCIENTIST	PROJECT SCIENTIST	STAFF SCIENTIST	ENGINEER	SENIOR TECHNICIAN	PROJECT ADMINISTRATOR
TASK #	TASK DESCRIPTION										
4	Tierra will provide:										
a	Property appraisals to include cost of relocations.										
b	Appraisal reviews.										
c	Offer letters for City review and signature.										
d	Negotiation services including recommendations for administrative settlements to City.										
e	Signed negotiation packets to City for payment.										
f	Transfer of ownership recording.										
g	Relocation assistance including recommendations for administrative settlements to City.										
h	Notice to City relocation has been completed and payment is due.										
130	ENVIRONMENTAL PERMITTING										
1	Prepare total project JARPA for USCAE Clean Air Act Sect 401,404 permits				8	40	40				
2	Prepare cultural resources documentation for City submittal to WSDFW				4	40		40			
3	Prepare Hydraulic Permit approval for City submittal to WSDFW					8		40			
4	DRAFT Shoreline Substantial Development Permit for City review and approval					40	40				
	HOURS PER DISCIPLINE	94	452	434	102	204	204	80	524	480	27

EXHIBIT B-2
CONSULTANT COST COMPUTATION – SUMMARY

NEGOTIATED HOURLY RATE (NHR):						
Classification	Man Hours	X	Rate	=	Cost	
PRINCIPAL-IN-CHARGE	72	x	\$233.89	=	\$16,840.08	
PROJECT MANAGER	390	x	\$214.58	=	\$83,686.20	
PROJECT ENGINEER	320	x	\$191.56	=	\$61,299.20	
ENVIRONMENTAL MANAGER	28	x	\$214.58	=	\$6,008.24	
SR ENVIRONMENTAL SCIENTIST	8	x	\$118.80	=	\$950.40	
PROJECT SCIENTIST	32	x	\$100.98	=	\$3,218.56	
ENGINEER	380	x	\$118.80	=	\$45,144.44	
SENIOR TECHNICIAN	472	x	\$121.77	=	\$57,475.44	
PROJECT ADMINISTRATOR	27	x	\$115.83	=	\$3,105.00	
Total Hours =	1671				Total NHR =	\$277,727.10
REIMBURSABLES:						
Mileage	300	X	\$0.580	=	\$174.00	
Miscellaneous Expenses	\$898.13	X	0%	=	\$898.13	
					Total Expenses =	\$1,072.13
SUBCONSULTANT COST (See Exhibit E):						
Subconsultant 1	\$34,433.00	X	10%	=	\$37,876.30	
					Total Subconsultants =	\$37,876.30
SUB-TOTAL (NHR + REIMBURSABLES + SUBCONSULTANTS):						
					Sub Total =	\$316,675.53
MANAGEMENT RESERVE FUND:						
SUB TOTAL =	\$316,674.87	X	10%	=	MRF =	\$0.00
GRAND TOTAL						
PHASE 2 COMPLETION GRAND TOTAL ONLY =						\$316,675.53
DOES NOT INCLUDE IMPLEMENTATION PHASE						
PREPARED BY:			Colleen Haerr, PE		DATE: 9/20/2019	
REVIEWED BY:			Thomas E. Skillings, PE		DATE: 9/20/2019	

EXHIBIT B-3

CONSULTANT COST COMPUTATION – EXPENSES

Item	Description	Basis	Quantity	Rate	Total
1	Telephone	Month			\$0.00
2	Auto Rental	Each			\$0.00
3	Lodging	Day			\$0.00
4	Per Diem-Meal	Day			\$0.00
5	Photo Copies - Blk & White	Each		\$0.10	\$0.00
6	Photo Copies - Color	Each		\$0.35	\$0.00
7	Half Sized Prints	Each		\$0.50	\$0.00
8	Full Sized Prints	Each		\$6.00	\$0.00
9	Postage	Month			\$0.00
10	Shipping	Month			\$0.00
11	FAXs	Each			\$0.00
12	Miscellaneous Project Costs	Month			\$898.13
13	Miscellaneous Survey Costs	Estimated			\$0.00
14	Traffic Control	Estimated			\$0.00
Total Miscellaneous Expenses					\$898.13
	Mileage	Per Mile	300	0.580	\$174.00
Total Expenses					\$1,072.13
Assumptions					
1	Telephone	Estimated			
2	Auto Rental	Estimated trips			
3	Mileage	Estimated miles			
4	Lodging				
5	Per Diem-Meal				
6	Photo Copies - Blk & White	Estimated			
7	Photo Copies - Colored	Estimated			
8	Half Sized Prints				
9	Full Sized Prints				
10	Postage	Estimated			
11	Shipping	Estimated			
12	FAXs	Estimated			
13	Miscellaneous Project Costs	Estimated			
14	Miscellaneous Survey Costs	Estimated			
15	Purchase Order	Estimated			
Prepared by: Colleen Haerr, PE		Date: September 20, 2019			

**CHEHALIS CITY COUNCIL MEETING
AGENDA REPORT**

TO: The Honorable Mayor and City Council

FROM: Jill Anderson, City Manager

BY: Caryn Foley, City Clerk

MEETING OF: September 23, 2019

SUBJECT: Resolution No. 11-2019, First and Final Reading – Declaring Surplus Property

ISSUE

The Police Department and the Public Works Department have property that is no longer needed. State law requires that property must first be declared surplus by the City Council before being sold, transferred, or disposed of.

DISCUSSION

The Police Department has one vehicle that has run its life expectancy and is being rotated out as part of the normal vehicle replacement rotation.

The Public Works Department has several items that include two old plotters that no longer work and the cost to repair versus new isn't worth it. They also have a broken chair beyond repair, and a file cabinet that can no longer be opened without force and has broken racks inside. It is also heavily dented.

The items will be appropriately disposed of as authorized by the City Manager.

FISCAL IMPACT

Any proceeds from items that are sold or auctioned will go to their respective department/division.

RECOMMENDATION

It is recommended that the City Council adopt Resolution No. 11-2019.

SUGGESTED MOTION

I move that the City Council adopt Resolution No. 11-2019 on the first and final reading.

RESOLUTION NO. 11-2019

**A RESOLUTION OF THE CITY OF CHEHALIS,
WASHINGTON, DECLARING PERSONAL PROPERTY OF
THE CITY OF CHEHALIS TO BE SURPLUS AND OF NO
FURTHER USE TO THE CITY, AND DIRECTING THE
DISPOSITION THEREOF.**

**THE CITY COUNCIL OF THE CITY OF CHEHALIS, WASHINGTON, DO
RESOLVE AS FOLLOWS:**

Section 1. The following described personal property of the city of Chehalis, Washington, a municipal corporation, shall be, and the same hereby is, declared to be surplus and no longer of necessary use.

Police Department	Identifying Information
One (1) – 2013 Dodge Charger	VIN: 2C3CDXAG2DH620117
Public Works Department	Identifying Information
One (1) Xerox Plotter	City Tag: 0005; Model # 6204
One (1) Hp Plotter Model 55000PS Design Jet	City Tag: 0004; Serial #SG3B72D00V
One (1) Wooden Chair	City Tag: 01009
One (1) Metal File Cabinet	City Tag: 00957

Section 2. The personal property described herein shall be disposed of by the City Manager.

ADOPTED by the City Council of the city of Chehalis, Washington, and **APPROVED** by its Mayor, at a regularly scheduled open public meeting thereof this _____ day of _____, 2019.

Mayor

Attest:

City Clerk

Approved as to form and content:

City Attorney

**CHEHALIS CITY COUNCIL MEETING
AGENDA REPORT**

TO: The Honorable Mayor and City Council

FROM: Jill Anderson, City Manager

BY: Trent Lougheed, Community Development Director
Celest Wilder, Development Review Specialist

MEETING OF: September 23, 2019

SUBJECT: Floodplain Management Planning Annual Progress Report

ISSUE

As a requirement for Community Rating System (CRS) accreditation, an annual Floodplain Management Planning Progress Report is required to be submitted to the governing board, local media, and the state National Flood Insurance Program (NFIP) coordinating office.

DISCUSSION

The Lewis County Multi-Jurisdictional Hazard Mitigation Plan, adopted by the city on October 24, 2016, lists five specific goals in its mitigation strategy to:

1. **Reduce** the vulnerability of Lewis County communities to natural disasters;
2. **Optimize** allocation of hazard mitigation resources and sharing of information;
3. **Ensure** that our community is capable of initiating and sustaining emergency response operations during and after disasters;
4. **Maintain** continuity of public services during and after disasters; and
5. **Maximize** available resources for hazard mitigation activities and disaster recovery

Attached is a copy of the progress report prepared for the five goals and a narrative of the aspects of each goal as they apply to flood hazard mitigation.

FISCAL IMPACT

There is no fiscal impact associated with this agenda item.

RECOMMENDATION

This report is for public information purposes only.

SUGGESTED MOTION

No action is required.



Community Development Department
1321 S Market Blvd. Chehalis, WA 98532
(360) 345-2229 / Fax: (360) 345-1039
www.ci.chehalis.wa.us email: comdev@ci.chehalis.wa.us

Floodplain Management Planning Annual Progress Report

The Lewis County Multi-Jurisdictional Hazard Mitigation Plan, adopted by the City of Chehalis on October 24, 2016, lists five specific goals in its mitigation strategy. Below are the goals listed, the progress completed to reach the goals outlined, and a plan for future tentative projects in order to complete the mitigation strategy.

Goal 1: Reduce the vulnerability of Lewis County communities to natural disasters

- **City Staff continue to develop and reasonably maintain cost-effective activities and programs to:**
 - **Maintain and update hazard and disaster data**
 - Ongoing work with Lewis County GIS staff to provide the most accurate and up to date data.
 - **Reduce impact to existing development, infrastructure and facilities.**
 - Inform and educate general public on methods of retrofitting flood protection controls.
 - **Reduce vulnerability of new development through comprehensive land use planning**
 - All new development follows a comprehensive project review process to ensure that minimum required hazard mitigations are incorporated in to the planning and building process.
 - **Educate citizens, and both private and public sector organizations on flood hazards, techniques to reduce vulnerability, resources available, and disaster preparedness outreach.**
 - Correspondence sent four times annually to specific target audiences.
 - **Monitor effectiveness of activities currently in place.**
 - Phase 1 of Program for Public Information (PPI) complete. PPI Adopted by resolution January 14, 2019. Annual meeting date TBD.
 - **Update activities and programs as needed.**
 - Ongoing as needed.

Goal 2: Optimize allocation of hazard mitigation resources and sharing of information

- **Plan participants will coordinate local and regional activities/programs as appropriate to cost-effectively reduce disaster vulnerability for Lewis County communities.**
 - Maintain information available at various locations

- City of Chehalis Community Development
- Lewis County Public Services
- Lewis County Emergency Management Office
- Timberland Regional Library
- City of Chehalis Website
- Phase 2 of the PPI will develop an action plan for public activities (ex. fair booths, informational meetings) that provide for a more informed population as it relates to floods, associated hazards, and both pre and post disaster mitigation options.

Goal 3: Ensure that our community is capable of initiating and sustaining emergency response operations during and after disasters.

- Plan participants will strive to
 - **Develop and maintain the capability of emergency services organizations to detect emergency situations and promptly initiate emergency response operations.**
 - The city participates in ongoing training programs with Washington State Emergency Management, Lewis County Emergency Management, and other neighboring jurisdictional staff members.
 - **Cost-effectively protect critical public facilities from natural hazard impacts.**
 - Public critical facilities are assessed and monitored for compliance with natural hazard impact protection, and the appropriate action is taken if necessary to ensure their safety.
 - **Ensure that emergency services facilities and their associated utility and communications systems are capable of providing critical services.**
 - Monitored in conjunction with protection of the facilities themselves for natural hazard impact protection.
 - **Ensure access to key health care facilities and designated evacuation routes and shelters remain open and operable before, during, and after disaster events.**
 - Within the City of Chehalis, no key healthcare facilities are located within the SFHA,
 - Multi-jurisdictional effort to maintain access to nearest trauma center in neighboring jurisdiction.
 - **Retrofit and/or relocate shelters or structures for vehicles and equipment needed for emergency services operation to withstand disaster impacts.**
 - City of Chehalis Fire Department personnel on duty, and all associated equipment needed for emergency services operation have been relocated to a temporary location out of the floodplain.
 - Permanent location will either be located outside of the floodplain, or elevated a minimum of 3 feet above the Base Flood Elevation.

Goal 4: Maintain continuity of public services during and after disasters

- Plan participants will strive to:

- **Prepare and maintain plans to guide decision-making, resource allocation, and re-establishment of operations before, during, and after a disaster.**
 - City staff members participate in ongoing training programs with Washington State Emergency Management, Lewis County Emergency Management, and other neighboring jurisdictional staff members.
- **Protect important records, documents, and information systems from the impacts of disasters.**
 - Records archives, dedicated document storage areas, and information systems department are located outside of the SFHA.
- **Reduce the disaster vulnerability of buildings and facilities used for routine operations.**
 - Vulnerability assessed in conjunction with essential critical facility assessments.

Goal 5: Maximize available resources for hazard mitigation activities and disaster recovery.

- **Plan participants will:**
 - **Comply with state and federal requirements to ensure continued eligibility of participating jurisdictions for federal pre-disaster and disaster relief funding.**
 - Ongoing training and education with State and County Emergency Management to ensure requirements are met.
 - **Work cooperatively to identify and pursue hazard mitigation grant and funding opportunities.**
 - Actively participate in training and education opportunities relating to mitigation grants and funding opportunities
 - **Share and disseminate information regarding hazard mitigation grant and funding opportunities with public agencies, not-for-profit organizations, business and industry.**
 - The PPI committee is focusing on this subject. Plan adopted January 14, 2019. Next meeting to plan best course of action for delivery of information, date TBD
 - **Participants will develop community “neighborhood” preparedness plans.**
 - Work with Emergency Management offices and personnel at the City, County, and State levels to develop and implement.

This report will be updated annually as part of the City’s ongoing efforts to maintain Community Rating System membership requirements.

Celest Wilder, CFM



***Development Review Specialist
Building Inspector***

**CHEHALIS CITY COUNCIL MEETING
AGENDA REPORT**

TO: The Honorable Mayor and City Council

FROM: Jill Anderson, City Manager

BY: Trent Lougheed, Public Works Director
Lilly Wall, Recreation Manager

MEETING OF: September 19, 2019

SUBJECT: Recreation Park Improvement Project – Request to Use Funds
Designated for the Project to Proceed with Change Orders to Advance
the Work Needed

INTRODUCTION

In July 2019, the City Council approved a construction contract with KBH Construction for improvements to Recreation Park in the amount of \$2,104,704.24 plus a 3% contingency for authorization to use \$2,167,845.24 of the Recreation Park Improvement Project budget for ballfield renovations and adding general park amenities, such as walkways. The total budget is approximately \$4.2 Million, including Penny Playground.

The purpose of this agenda item is to request authorization from the City Council to use an additional \$612,500 of the existing project budget to proceed with work in the field that has been identified that exceeds the current authorization. If approved, this work would include additional site preparation activity related to the playground portion of the project that was anticipated to occur later in the project progression at the time of the contract award.

CHANGE ORDER COMPONENTS

This is a request to authorize the City Manager to execute change orders for the Recreation Park Project for the ballfield and playground site preparation components in the amount of \$612,500, including tax and a 5% contingency, through the current contract with KBH Construction.

This request includes an increase of \$157,500, including sales tax and a 5% contingency, for the ballfields. The funds will be used for:

- Replace and install sports complex fencing and back-stop netting
- Excavate and repair soil at field #3 and field #4 due to wet areas caused from an existing irrigation leak

- Replace mechanically seeded outfields with imported sod on all four fields to ensure playability next season
- Contingency for additional unforeseen challenges.

In addition, this request includes up to \$455,000, including sales tax and a 5 % contingency, for all aspects of the playground site preparation. This will continue the site preparation activities being done at the park by KBH Construction. This work does not include the purchase and installation of the playground ground surfacing and equipment, which will be purchased using government contract services.

FISCAL IMPACT

Funds have been designated for Recreation Park and budgeted for that purpose. This request falls within the Recreation Park Improvement Project budget.

RECOMMENDATION/COUNCIL ACTION DESIRED

The administration recommends that the City Council authorize the City Manager to manage and execute additional change orders to the existing contract with KBH Construction for work at Recreation Park not to exceed \$612,500, which would increase the total contract to \$2,780,345.24.

SUGGESTED MOTION

I move that the City Council authorize the City Manager to manage and execute additional change orders to the existing contract with KBH Construction for work at Recreation Park not to exceed \$612,500, which would increase the total contract to \$2,780,345.24.

**CHEHALIS CITY COUNCIL MEETING
AGENDA REPORT**

TO: The Honorable Mayor and City Council

FROM: Jill Anderson, City Manager

BY: Trent Lougheed, Public Works Director
Dave Vasilauskas, Water Superintendent

MEETING OF: September 23, 2019

SUBJECT: Chehalis River Raw Water Pipeline Replacement Study Project

ISSUE

Discuss and provide options to City Council on Chehalis River Pipeline Replacement Project and seek City Council's direction.

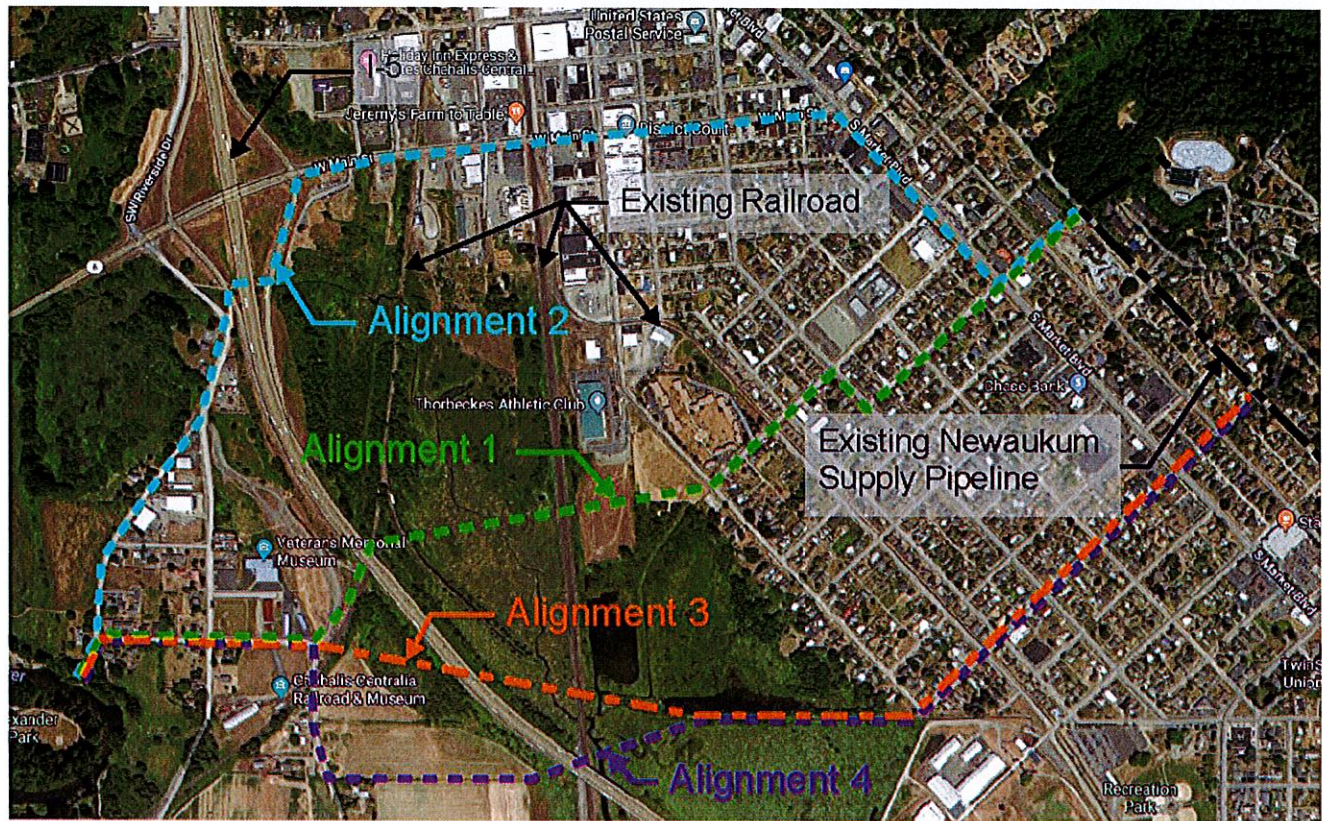
BACKGROUND

The city Water Division maintains over 7,500 feet of 18-inch steel raw water pipeline that is used to pump raw water from a pump station on the Chehalis River to the Water Treatment Plant. This steel pipe was installed in 1960 and is near the end of its designed life.

Approximately 2,500 feet of pipeline is located within a designated wetland, crosses under I-5, railroads, or within contaminated sites. The city hired the engineering services of Kennedy Jenks in March 2019 to investigate ways to get a cost-effective solution to replace this pipeline. The purpose of hiring an engineering consultant was to evaluate various alignment options and determine the best route for the city to plan and budget for the future pipeline replacement.

DISCUSSION

Below is the Kennedy Jenks summary on several possible pipeline alignments, as shown on the following maps:



Alignment 1. Retrace original alignment.

This option would route east from the Chehalis River pumping station, under I-5 at the Port of Chehalis rail undercrossing, under the wetlands to roughly the intersection of Pacific Street and SW 3rd Street, jog to SW 4th Street at Cascade Avenue, and up to the water treatment plant on the hill east of the city.

This alignment has two key disadvantages for a replacement pipeline – a long tunneling segment under the old American Crossarm site (a superfund landfill site and may have contaminants), and it is not cost effective to disturb wetlands with open trenching that would cause high construction costs and additional permitting.

Alignment 2. Northern alignment.

This option heads north from the pump station and crosses the freeway by micro-tunneling. It then proceeds east up Main Street, south down Market Boulevard, and then up SW 4th Street to the water treatment plant. Crossing of railroads is by jack and bore, which is more affordable than micro-tunneling).

This alignment is favorable due to having the highest percentage of conventional construction methods, while minimizing micro tunneling. This results in this alignment being the least costly even though it is longer than the other alternative alignments.

Alignment 3. Southern alignment.

This alignment heads due east from the pump station, then jogs south across the Port of Chehalis railroad at Hillburger Road. From there, it routes east along the existing city easement containing a sewer main. When the line reaches the freeway, micro-tunneling is used to cross the freeway, railroad, and then up to an abandoned rail embankment/grade (see Figure 3). The line would follow the embankment to SW 9th Street, follow the street up to SE Adams Avenue and then tie into the existing 14-inch Newaukum River raw water pipeline, which heads to the treatment plant.

This alignment is not disruptive to traffic, but costs are more than Alignment 2 because of longer micro-tunneling.

Alignment 4. Far southern alignment.

Alignment 4 is basically the same as Alignment 3 but goes further to the south along Hillburger Road before crossing I-5 and BNSF simultaneously under the bridge where they cross (i.e., BNSF under I-5).

This alignment has longer tunneling distance and some risks on permitting.

FURTHER DISCUSSION

Cost for these alignments' options vary significantly, mostly due to tunneling lengths/costs. Alignment 1 is the most expensive at \$ 17.8 million. Alignment 2 was the recommended replacement option based on a matrix evaluation with a cost of \$8.0 million. These costs include an additional 30% contingency until environmental research, permitting, and 30% plans are complete.

The costs for the first studied alignments were higher than expected. With the information on the original alignment the options were adjusted to bring costs down. Four alternative alignments are described in the following.

Alignment 2A. Northern alignment with above ground I-5 crossing.

In lieu of a tunnel, an above ground segment of pipeline would be installed on sleepers under I-5 and across Dillenbaugh Creek (self-supported). See **Error! Reference source not found.** and Figure 5 – Alignment 2A Under I-5. The above ground segment of this line would be constructed in 304L stainless steel to provide robustness and corrosion resistance where the high-density polyethylene (HDPE) pipe may be inappropriate above ground. The line would be insulated and electrically heat traced for freeze protection in the winter when the pipeline would likely be idle. As can be seen in the referenced Figures, the above ground routing is near Dillenbaugh creek and may trigger an Army Corp permit.

This option is like Alignment 2 other than it is above ground to cross under I-5. This is done by routing the line under the Dillenaugh Creek bridge but could have some permitting issues with WSDOT. This option should be authorized by the state before being selected but could be a much lower cost rather than tunneled option but could need more permitting.



Alignment 2 B. Truncated northern alignment with above ground I-5 crossing.

Alignment 2B varies from alternative Alignment 2A by diverting down SW Cascade Avenue to intercept the original pipeline at SW 3rd Street. The new pipeline would then tie into the existing line. The section of the original pipeline between the pump station and tie point would be grouted shut and abandoned. The reused section of piping, routing under city streets and to the treatment plant, can be accessed for service if problems develop. It also poses a better candidate for conventional refurbishment or lower cost replacement (conventional trenching) at a later date if the line's age starts to cause service issues. This alignment's above ground proximity to Dillenaugh creek may trigger an Army Corp permit.

This alignment is the same as alignment 2A, but at the intersection of Main and Cascade Avenue the line would go down Cascade and tie into the existing line on third street. This could save 1500 feet of piping to bring the cost down to \$7.1 million but may have more permitting effort.

FISCAL IMPACT

Estimate Summary (Based on estimate +30% contingency):

- **Alignment 1:** \$30,996,000
- **Alignment 2:** \$17,771,000
 - Alignment 2A: \$7,995,000
 - Alignment 2B: \$7,124,000
- **Alignment 3:** \$22,100,000
- **Alignment 4:** \$18,382,000
 - Alignment 4A: \$18,213,000
 - Alignment 4B: \$19,617,000

In response to feedback from the city, Kennedy Jenks evaluated variations on Alternatives 2 and 4, which were the top two preferred options that emerged from the initial options evaluation. Four additional alternate alignments for replacement were considered. Of these options, Alignment 2B is the preferred option for consideration by the city, as described below:

- **Alignment 2A.** This alignment examined the possibility of avoiding a tunneled crossing of the freeway altogether. The key risk to this option is acceptance by WSDOT. The line poses little risk to the bridge structure, and construction is straightforward, but routing of utilities through space presumably designated for flood flow of the creek may raise questions during permit/easement acquisition. This option is expected to be on the order of **\$8.0 million**, several million dollars less than the primary replacement options considered. It may require extra permitting effort.
- **Alignment 2B. (Recommended Option)** This alignment extended the principal of Alignment 2A and reused a serviceable section of the existing line where it runs through the city (from intersection of SW Cascade and 3rd to treatment plant). This eliminates 1,155 feet of piping and further reduces the cost to **\$7.1 million**. The alignment adds some longevity and risk considerations (e.g., remaining useful life of the reused pipe) but there are several options available to the city to address these concerns. For this reason, Kennedy Jenks recommends 2B as the preferred option and that 2B is explored with the State at the earliest possible time for indication if it would be acceptable. This option may require extra permitting, as with Alignment 2A.

- Alignment 4A and 4B are not being considered strictly due to cost.

It is anticipated that the city will be applying for funding for this project, and alternative financing options will be researched at the IACC conference this fall.

RECOMMENDATION

The administration recommends that City Council authorize staff to proceed with Alignment 2B

SUGGESTED MOTION

The administration recommends that City Council authorize staff to proceed with Alignment 2B.