

BENTON COUNTY
Stormwater Management Plan
(SWMP)

Permit #: 113609



Benton
County

OREGON

Submitted to:

Oregon Department of Environmental Quality
for NPDES Phase II MS4 Compliance

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Program Components

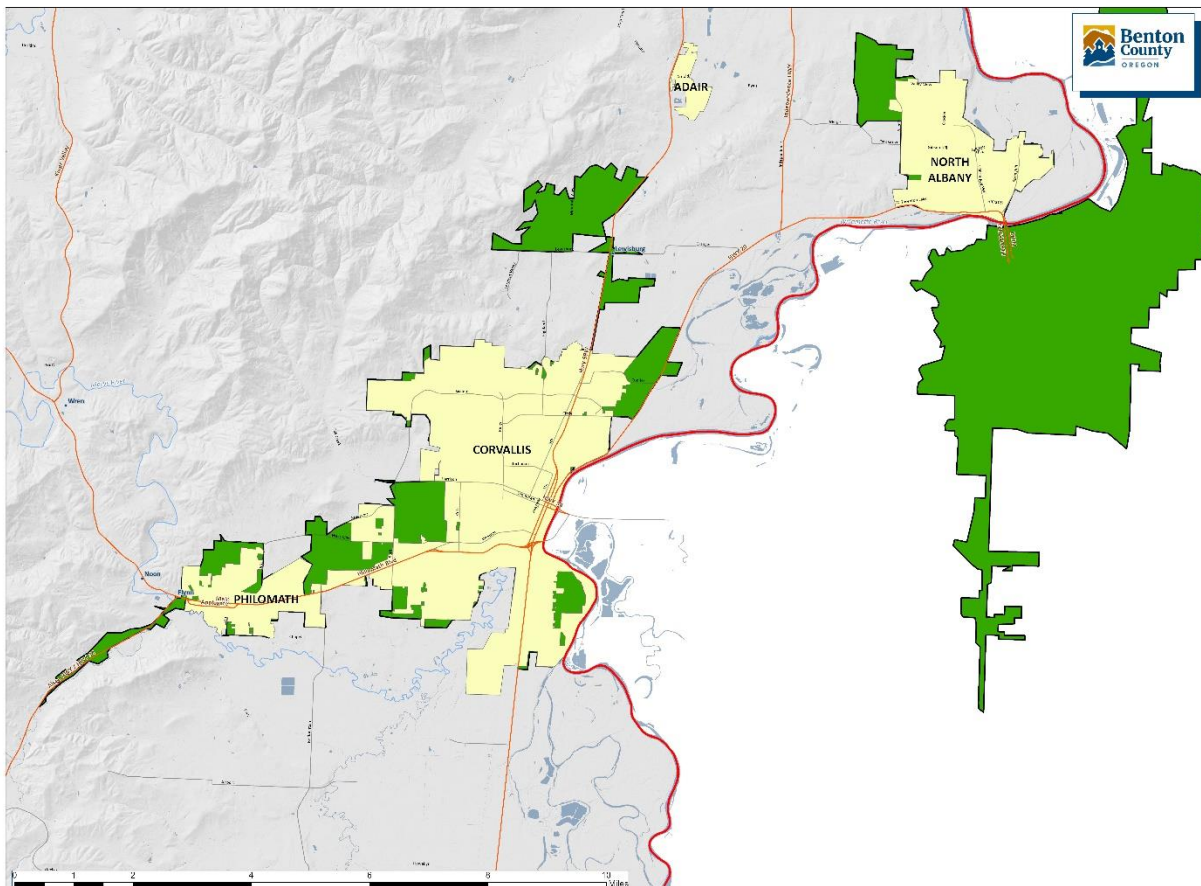
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Introduction

Starting in 1990, the US Environmental Protection Agency (EPA) began to require large municipalities to obtain National Pollutant Discharge Elimination System (NPDES) permits for their municipal separate storm sewer systems (MS4). An **MS4** is a system of conveyances, including roads, ditches, gutters, catch basins, and storm drains that are owned or operated by a public body.

In December of 1999, the EPA adopted rules to implement “Phase II” of its national stormwater program. Phase II expanded the stormwater permitting program to include smaller communities located in US census-defined Urban Areas. The Corvallis Urbanized Area includes the urban fringe surrounding the cities of Corvallis, Philomath, and Adair Village (see map below).



DEQ NPDES Phase II permit rules require communities to develop, implement, and enforce stormwater management plans that address six minimum control measures:

- 1) Public Education and Outreach
- 2) Public Participation and Involvement
- 3) Unlawful Discharge Detection and Elimination (Illicit Discharge)
- 4) Construction Site Runoff Control
- 5) Post-Construction Runoff Control
- 6) Pollution Prevention/Good Housekeeping

This document outlines the different components of Benton County's **Stormwater Management Plan (SWMP)**. The program has been implemented to meet the requirements of the National Pollutant Discharge Elimination System (NPDES) Program as developed under the federal Clean Water Act.

This document was developed through the collaborative efforts of staff from Benton County Community Development, Public Works, Environmental Health, and Natural Areas and Parks Departments.

It should be noted that this document is, and will remain, a living document and is under development and review. The reader should expect to encounter changes as the Control Methods are modified to meet the conditions of current DEQ MS4 permitting.

CM 1. Public Education and Outreach

Primary Goals: To implement a public education program to distribute effective educational materials to the community and conduct outreach activities that address the impacts of stormwater discharges on water bodies and the steps that the public can take to reduce pollutants in stormwater runoff.

Education can ultimately reduce the amount of contaminants entering the surface water by informing citizens of preventative and good housekeeping practices.

1.1. Stormwater Education and Outreach Strategy

1.1.1. Identify, Shape and Refine Educational and Outreach Materials

Benton County will continue to work to identify and monitor which stormwater pollutants are the focus of mitigation and control efforts. The County uses this information to describe and illustrate the best management practices (BMP's) that address stormwater pollution, and identify target audiences. The County will use information and target topics suggested by the current permit to appropriately compose the content of hard copy and digital outreach materials.

Benton County works with stakeholders such as the City of Philomath, the Marys River Watershed Council and other local Watershed Councils, Benton County Soil and Water Conservation District, Greenbelt Land Trust, the NPDES stakeholders' committee, contractors, developers, and the general public to review informational materials and gather feedback on their readability and effectiveness before they are distributed. The County also gathers input from internal committees and advisory groups, as well as County elected officials and upper management. The County asks contractors, developers, and the general public (contact groups) if flyers are readable, convincing and effective and if the outreach materials are likely to change their behaviors. These contact groups are also asked how the flyers can be improved to increase their effectiveness. This feedback is evaluated and used to refine the flyers and website content.

Rationale

- Current fliers and brochures are updated to adapt to changing environmental and regulatory conditions.
- Input from the general public and experienced stormwater quality professionals helps to improve the information provided to constituents and collaborators in order to convey the importance of stormwater management and monitoring.
- The end goal of these efforts is behavior modification of those residing and working within Benton County. Educational and outreach materials must be effectively motivate members of the public to develop habits and implement best practices that benefit water quality.

Measurable Goal(s)

- ✓ Obtain public feedback to improve the County's flyers and website.
- ✓ Update flyers and modify the stormwater website.
- ✓ Address stormwater quality issues directly with contractors, elected officials and the general public.

Goal Rationale

Because members of the target audiences review the draft educational materials, the final products are more likely to be effective.

1.1.2. Periodic Evaluation of Education and Outreach

Benton County will evaluate this SWMP **every five years** (current version: 2022, next major review 2027). Part of recurring evaluations is the assessment of the effectiveness of the educational materials and outreach. County stormwater staff will share and compare successes and challenges. Topics of these discussions will include, but are not limited to, an estimation of the public's current awareness and understanding of stormwater issues and whether or not implementation of and compliance with best management practices has increased. Staff will resultantly modify educational materials as needed after each subsequent assessment.

Rationale

- Public awareness can change with time and educational materials should reflect these changes.
- A wide spectrum of County staff are engaged with stormwater issues including administrative and incident response personnel, building inspectors, environmental health specialists, planning staff, engineers, facilities and road maintenance workers, and Geographic Information Systems analysts. Gathering input from a range of professional and vocational sources helps to determine the effectiveness of public education and outreach efforts. This input also helps identify ways to improve the program.

Measurable Goal(s)

- ✓ Review and update education and outreach materials every five years.
- ✓ Edit and update flyers, website, and support materials as needed.

Goal Rationale

Periodic evaluation and reevaluation allows staff and the public to share information and implement and/or respond to lessons learned.

1.2. Make Stormwater Information Available to the Public

1.2.1. Point of Contact Program

Public-facing points of contact can be found at the following Benton County departments: Community Development; Environmental Health; Natural Areas and Parks; and Public Works. On request, at each point of contact (a reception counter in a County office), Benton County provides a variety of information relating to stormwater quality. In cases of major changes to the stormwater program, additional materials will be displayed at counters and attached to outgoing Erosion and Sediment Control (ESC) permit packets.

Materials may include fact sheets, flyers, posters, maps, activity books and other printed outreach materials. These outreach materials are available to any visitor. A packet of some of this information is additionally provided to all applicants who propose a project or projects that involve ground disturbing activities.

Rationale

- The Point of Contact program reaches citizens who visit County offices to obtain permits or approvals that may affect stormwater quality during construction, including builders, developers, homeowners, farmers and loggers. The type of information distributed by staff is ultimately determined by the nature of the proposed development activity.

Measurable Goal(s)

- ✓ Flyers and handouts are readily available in departmental public interaction areas.
- ✓ County staff distribute flyers, handouts and/or factsheets with permit application or issuance documents.
- ✓ Procedures are established for receiving public information requests, complaints, etc.

Goal Rationale

Members of the public who apply to the County for building permits, road approach permits, and land use applications propose land disturbing activities that impact stormwater quality. These applicants are the County's primary target audience for stormwater-related outreach materials.

1.2.2. Update and Maintain Stormwater Web Pages

Benton County has established a stormwater webpage on the County's website (<https://www.co.benton.or.us/cd/page/stormwater-program>) that can be accessed independently, as well as through links on the Environmental Health Department, Public Works Department, and Community Development Department websites. The website provides information on the County's SWMP, stormwater quality/quantity issues, actions that citizens can take to improve stormwater quality, and links to relevant County Code sections and ordinances.

The site also provides contact information for questions and comments as well as the contact information for the program manager. The site also features information on how this SWMP was developed and how citizens can get involved as well as downloadable fact sheets, illustrations and diagrams, photographs, and links to other websites (e.g., **MRWC, BSWCD, City of Corvallis, City of Philomath, DEQ, EPA**).

Rationale

- Benton County has a large number of visitors to its website. Websites are an efficient information distribution tool and are accessible 24 hours a day, 7 days a week. Other than the initial setup cost, websites are cost effective to maintain and update. Providing information to the public about actions they can take and how they can get involved with the County's SWMP can improve stormwater quality.

Measurable Goal(s)

- ✓ Stormwater website with links to/from related websites.

Goal Rationale

The presence of a website is necessary so that people can have access to a larger body of detailed information and resources that cannot be easily condensed into written materials for hard copy distribution.

1.2.3. Publish and Distribute Printed Outreach Materials for the General Public

Benton County has created and continues to create stormwater brochures on a variety of subjects directed at a variety of audiences. The County continues to collaborate and share printed outreach materials from and with other jurisdictions, agencies and NGOs (e.g. the Cities of Albany [CoA], Corvallis [CoC] and Philomath [CoP], Benton Soil & Water Conservation District [BSWCD], Greenbelt Land Trust [GLT], the Long Tom, Luckiamute and Marys River Watershed Councils [respectively LTWC, LWC, & MRWC], the United States Environmental Protection Agency [EPA], and the Oregon Department of Environmental Quality [DEQ], among others). These shared materials are made available to the public upon request and are placed in various public spaces at Benton facilities. The purpose of the printed outreach effort is to educate the general public about the negative impacts of pollution in stormwater runoff and present methods and strategies to prevent pollution.

Printed outreach material content includes:

- A description of the issues and the associated implications
- Practices and techniques the reader can follow to improve stormwater quality
- Relevant local information, such as ordinances, programs, opportunities to get involved or volunteer
- Contact information and/or website URL's for other jurisdictions, agencies and NGO's
- Benton County stormwater website URL for more information
- Benton County staff contacts for more information

Rationale

- The Planning/Building Department and Environmental Health permit counters receive a high volume of walk-in traffic. Flyers displayed at these locations are available to the public and serve to increase awareness of stormwater issues.
- The flyers provide an overview of actions available to the public that benefit stormwater quality and inform them where they may obtain more information.
- Updating existing printed outreach materials or a selection of new brochures keeps the topics at hand interesting, relevant, and current.
The presence of the printed outreach materials in highly visible places at County facilities keeps the topic of stormwater quality visible for Benton County residents.
- The presence of brochures and/or availability upon the public's request from Marys River Watershed Council, City of Corvallis, and Benton Soil and Water Conservation District ensures that current information is shared and collaborating parties are on the same page.

Measurable Goal(s)

- ✓ Maintain a standing inventory of printed outreach materials relating to stormwater quality focused on the general public consisting of fact sheets, flyers, posters, maps, and/or pamphlets.
- ✓ Maintain presence of the printed outreach materials in highly visible places at County facilities.
- ✓ Distributing printed outreach materials at the time of building permit or septic feasibility applications.

Goal Rationale

Printed outreach materials available in a variety of formats and locations leads to an increased likelihood the public will see it and engage with it.

1.2.4. Publish and Distribute Printed Outreach Materials for Building Professionals

Benton County regularly updates existing stormwater outreach materials that target specific and general building and construction activities. These materials are available to the public at the **Benton County Environmental Health Department, Public Works, and Community Development Departments**. The purpose of the printed outreach effort is to educate builders, contractors, development professionals and permit applicants about the negative impacts of pollution in stormwater runoff and present methods and strategies to prevent pollution.

Printed outreach material content includes:

- A description of the issues and the associated implications
- Practices and techniques the reader can follow to improve stormwater quality
- Relevant local information, such as ordinances, programs, opportunities to get involved or volunteer
- Contact information and/or website URL's for other jurisdictions, agencies and NGOs
- Benton County stormwater website for more information
- Benton County stormwater program staff contact information

Rationale

- The Planning/Building Department and Environmental Health permit counters receive a high volume of walk-in traffic. Flyers displayed at these locations increases awareness of stormwater issues.
- Construction activities have the potential to add pollutants to stormwater runoff; therefore, targeted flyers can prevent potential pollution before it starts.

Measurable Goal(s)

- ✓ Maintain a standing inventory of printed outreach materials relating to stormwater quality focused on builders, contractors, development professionals and permit applicants consisting of fact sheets, flyers, posters, maps, and/or pamphlets.
- ✓ Ensure presence of the printed outreach materials in highly visible places at County facilities.
- ✓ Distribute printed outreach materials at the time of building permit or septic feasibility applications.

Goal Rationale

People involved in the construction industry and conducting large-scale ground disturbing activities are likely to benefit the most from these outreach materials. Making printed outreach materials available in a variety of formats at our permit counters establishes a policy of distributing that information at the time of permit application, creating an increased likelihood that building professionals will engage with it. Distribution early in the development process increases the likelihood that appropriate practices and precautions are taken during construction, reducing the probability that future issues will occur.

1.2.5. Coordinate Public Education with Other Jurisdictions, Agencies and NGOs

Benton County currently coordinates public education opportunities with the **Cities of Albany, Corvallis, and Philomath; Benton Soil and Water Conservation District; Greenbelt Land Trust; the Long Tom, Luckiamute, and Marys River Watershed Councils** and others. The Cities mentioned above have fully funded programs for erosion prevention and sediment control, stormwater management, and public education and outreach. Benton County works closely with these entities and outreach materials are typically shared between them.

Rationale

- Coordinating public education and outreach with other jurisdictions, agencies and NGOs reduces duplication of effort, capitalizes on information distribution mechanisms and ensures consistent messaging.

Measurable Goal(s)

- ✓ Active collaboration with the City of Philomath, Marys River Watershed Council, and Benton County Soil and Water Conservation District at two or more annual educational events (e.g. Earth Day Events, Philomath Arbor Day Celebration, Benton Soil and Water Conservation District Native Plant Sale, and Benton County Fair & Rodeo).
- ✓ Flyers present at various events attended by the by the City of Corvallis, City of Philomath MRWC, and BSWCD.

Goal Rationale

The number of events defines the amount of outreach the County has achieved.

CM 2. Public Participation and Involvement

Primary Goals: To improve the quality and sustainability of the Storm Water Management Program (SWMP) by incorporating a wide range of ideas and perspectives into the preparation, implementation and adaptive management. To improve the transparency of SWMP development and modification to the affected parties by involving them in the process.

2.1. *Involve the General Public and Stakeholders in SWMP Update Process*

2.1.1. *Coordinate a Committee of Local Government Stakeholders to Guide Program Implementation*

Benton County identifies local government stakeholder representatives to participate in the review of the SWMP.

A committee of stakeholders has been established who can review and provide input to the development of the various elements of the SWMP. The role of this committee is advisory. Upon updates, final amendments proposed to Department Directors will note the committee's recommendations, and where staff submittals diverge from committee input, providing a rationale of for the decisions made.

Benton County sponsors an NPDES local agency advisory group ("**NPDES Stakeholders Committee**"). This group meets monthly and works specifically on the local MS4 permit implementation issues.

Rationale

- Involving local agency personnel improves the quality of the final product and ensures a cross-disciplinary review of proposed program elements.
- Providing stakeholders with a structured means to provide input toward a final programmatic product improves the quality of that product.
- The local agency advisory group allows jurisdictional authorities to address issues regularly and to compare implementation lessons learned.

Measurable Goal(s)

- ✓ The creation and continuation of a stakeholders committee of at least 8 members from different departments and disciplines whose work is related to stormwater quality.
- ✓ Stakeholder committee endorsement and/or documented input regarding proposed program elements of the stormwater program, and/or a detailed explanation of the committee's position where it differs from the proposed draft.
- ✓ Increased jurisdictional response time to program implementation challenges.

Goal Rationale

Coordinating a committee comprised of a variety of departments and disciplines ensures that a wide range of perspectives are presented. This provides an informed review of program elements and will

improve the acceptability of the plan to the public. Per DEQ requirements, the SWMP must contain specific elements which are practically achievable and have clearly defined, measurable success criteria. During review by Department Directors, staff must provide detailed explanations of program implementation proposals where they differ significantly from those proposed by the stakeholder committees.

2.1.2. Coordinate a Committee of Non-Government Stakeholders to Guide Program Implementation

Benton County has identified interested stakeholders from various professional and interest groups, including builders, construction professionals, land developers, environmental groups and property owners, to participate in a public stakeholders (Stormwater Implementation) group which will provide input on new NPDES Phase II requirements, including the SWMP.

This committee of volunteer stakeholders is established to review and provide input in regards to the development of the various elements of the SWMP. The role of this committee is advisory. Final plan updates proposed to the Department Directors note the committee's recommendations. In cases where staff submittals diverge from committee input, rationale is provided for the decisions made.

Rationale

- Involving the public improves the quality of the final product and ensures a cross-disciplinary review of proposed program elements.
- Providing stakeholders with a structured means to provide input toward a final programmatic product improves the quality of that product.

Measurable Goal(s)

- ✓ The creation and continuation of a stakeholders committee of at least 8 members from different departments and disciplines whose work is related to stormwater quality.
- ✓ Stakeholder committee endorsement and/or documented input regarding proposed program elements of the stormwater program, and/or a detailed explanation of the committee's position where it differs from the proposed draft.

Goal Rationale

Coordinating a committee comprised of a variety of professional and interest groups ensures that a wide range of perspectives are presented. Per DEQ requirements, the SWMP must contain specific elements which must be practically achievable and have clearly defined, measurable success criteria. During review by Department Directors, staff must provide detailed explanations of program implementation proposals where they differ significantly from those proposed by the stakeholder committees.

2.1.3. News, Press, and Social Media Releases

Benton County regularly generates news releases, and social media postings regarding the SWMP, its status during the update process, the science and regulations behind it, and ways in which people can learn more or become more involved. The Corvallis Gazette-Times / Albany Democrat-Herald is widely read in Benton and Linn Counties, especially within the MS4 area. The staff of these newspapers are

responsive to and proactively engaged with the County's news releases regarding matters of community concern and environmental issues. The County's Board of Commissioners' office and Public Information Officer (PIO) work to supply the public with information via multiple platforms including Facebook, Twitter, Instagram, YouTube, NextDoor and LinkedIn. Staff assigned to MS4 oversight and policy development provide postings to The Board's office and the PIO regularly.

Rationale

- Local newspapers (Corvallis Gazette-Times / Albany Democrat-Herald) are widely read in Benton County, and are useful mediums for getting information to the general public.
- Providing information to local media and via social media works to increase public awareness about the issues of water quality in general and the SWMP in particular. These notices and outreach efforts also provide avenues of engagement for members of the public who wish to learn more or become involved.

Measurable Goal(s)

- ✓ At least one news release per year discussing the stormwater program, its status and opportunities for public involvement.

Goal Rationale

This minimum frequency of news release ensures that at least an annual update of SWMP status and activities is presented to the general public.

2.1.4. Provide Broad Public Participation Opportunities to Obtain SWMP Input

An initial public meeting was held to inform citizens in a public forum of the purpose and scope of the SWMP. Input and engagement with the review process was solicited and encouraged.

Benton County continues to notify stakeholders and participate in public outreach meetings, forums, workshops, and celebrations to obtain input on SWMP modifications. Notifications are also posted at point of contact counters, on the County's website and via social media. The County also employs general notification to encourage participation and review. Meetings (and the notification itself) explain program elements, elicit input on key issues, and inform interested citizens of other involvement opportunities.

As elements of the SWMP are embarked upon, revised and/or finalized, additional public meetings may be held. These meetings will address topics specific to the other elements are discussed in those Control Measure sections.

Rationale

- Public meetings, forums, workshops, and celebrations are a useful way to deliver information to interested citizens and attract attention to program needs. They also provide an opportunity to obtain input from a broader audience than the stakeholder committees.

Measurable Goal(s)

- ✓ An initial public meeting with adequate notification to interested parties and the general public.
- ✓ Giving citizens an opportunity to ask questions and to provide input; contact information for staff will be provided for follow-up questions and on-going communications.
- ✓ Establishing a mailing list whereby interested people can receive notification of future meetings.
- ✓ Including interested residents in stakeholder committees.

Goal Rationale

One general public meeting is sufficient to get the word out about the SWMP process, collect general input and establish an understanding of the process with the public. The initial 2021 meeting also had the original purpose of establishing a communications channel between the public and Benton County staff. This established channel of communication can be used subsequently to ensure that questions are answered and input is received by staff. Citizens interested in further involvement were encouraged to continue to sign up for mailing lists, apply to serve on stakeholder committees or be referred to volunteer work with the County or other NGO's.

2.1.5. Hold Public Hearings and Board of Commissioners Work Sessions When Ordinances are Proposed

Benton County holds public hearings, with notification to affected parties and the general public, before adopting ordinances. In the cases of amendments to the Benton County Development Code (e.g. construction site erosion control and post-construction stormwater elements), public hearings are held by the Benton County Planning Commission. Public hearings apply to each of the following programs:

- The illicit discharge program
- The erosion and sediment control program, and
- The post-construction site runoff program

These new programs require Benton County Code and Development Code modifications and additional ordinances through the implementation period.

Rationale

Public hearings are required before adoption or updates of new code and/or ordinances. In addition to being a legal requirement, public hearings provide transparent deliberation by the decision makers and an opportunity for formal comment by members of the public.

Measurable Goal(s)

- ✓ Public hearings which comply with Benton County Code and Charter, and state statute.

Goal Rationale

Achieving this goal ensures that public hearings fulfill their purpose of enabling thoughtful consideration of the matter and incorporating public input.

2.2. *Involve the General Public in Implementation of the SWMP*

2.2.1. *Follow Adopted Procedures for Inquiries and/or Complaints*

Benton County maintains and actively promotes adopted procedures for receiving, logging, investigating and responding to complaints or inquiries from the public concerning stormwater quality. This includes potential illicit discharges, unauthorized runoff from construction sites, and impacts from municipal, industrial, commercial and resource operations.

This program component is directly related to **Control Measure 3, Illicit Discharge Detection and Elimination (IDDE)**. The County relies heavily on the observations and input of the public for observation and information regarding water quality issues. The County's monitoring program thus relies on citizen involvement to monitor and maintain stormwater quality. The County will continue to work with the **Cities of Albany, Corvallis, and Philomath; Benton Soil and Water Conservation District; Greenbelt Land Trust; the Long Tom, Luckiamute, and Marys River Watershed Councils** and others to educate and engage the public regarding water quality monitoring and reporting. Furthermore, Benton County cooperates and participate in volunteer monitoring opportunities through these entities. Directions and contact information regarding how and where to lodge complaints is contained within printed outreach materials, as well as the stormwater quality website. Point of Contact staff are trained regarding intake and processing of inquiries and complaints.

Rationale

- Information from the public is a highly valuable component of any monitoring program. The County does not have the staff or funding for continuous monitoring of all stormwater facilities. Members of the public often notice and report conditions that are not observed by County staff or routine maintenance monitoring.
- A specific and clearly defined procedure for handling complaints increases the effectiveness of the IDDE program, and increases the public's confidence in the Stormwater Program as a whole.

Measurable Goal(s)

- ✓ Follow procedure for receiving, logging, investigating and responding to complaints.
- ✓ Prepare an annual report of complaints received and action taken.

Goal Rationale

A written procedure ensures that all complaints are recorded and dealt with in a standardized manner. An annual report encourages completion of action on complaints, and enables consideration of trends. Together these goals will establish an accountable and actionable procedure for responding to complaints.

2.2.2. *Maintain and Continue Storm Drain Mapping and Marking Program*

In cooperation with the **watershed councils, the Cities of Albany, Corvallis and Philomath, and other concerned NGO's**, Benton County maintains our program of volunteer storm stenciling (for private facilities) as well as placement and maintenance of catch basin and outfall marker medallions. These stencils and marker medallions are designed to discourage dumping of waste and directly inform the public that the storm drain inlet drains to a stream.

Rationale

- Informing the public about the negative consequences of actions is effective in changing behavior.
- Involving the public in activities such as storm drain stenciling fosters a sense of ownership for community resources.

Measurable Goal(s)

- ✓ Benton County, directly and through partnerships, provides materials and instructions for groups or individuals who desire to stencil private storm drains.
- ✓ Benton County maintenance personnel place and maintain storm drain marker medallions on all mapped Benton County structures.

Goal Rationale

Partnering with existing programs or and other agencies with similar goals and values is more efficient than acting individually. This practice also makes the program goals and values apply consistently across jurisdictional boundaries. Consistency in program messaging and practice allows the public to develop expectations from program actions. Overlapping jurisdictions cooperate more efficiently.

2.2.3. Maintain Partnerships with Watershed Councils and Environmental NGO's

The County currently maintains close relationships with the following organizations: **Benton Soil and Water Conservation District, Greenbelt Land Trust, and the Long Tom, Luckiamute, and Marys River Watershed Councils**. The Marys River Watershed encompasses the southern portion of the Corvallis Urbanized Area and approximately one third of Benton County's total area. County staff attend Marys River watershed council meetings at least once annually and are available for outreach and education events upon request. County staff also attend stormwater outreach and public education events for other listed local NGOs as the opportunity and need arises.

Benton County is available to partner with local NGO's on activities such as stream stewardship programs, cross-jurisdictional planning, and volunteer stormwater monitoring, as those activities coincide with and support the priorities and action plan of the respective organizations.

Rationale

- The watershed councils and local NGO's are diverse groups of concerned citizens working for common goals concerning water quality and the health of the environment. These groups offer a useful forum for disseminating information regarding the SWMP. It is more efficient for the County to obtain assistance through their network of volunteers and avenues of communication than for the County to duplicate that organization for SWMP-related activities.
- Frequent attendance at watershed council meetings develops rapport and keeps County staff apprised of conditions and sentiment across the watershed.

Measurable Goal(s)

- ✓ Benton County staff attendance at least once a year at meetings of the Marys River Watershed Council.

Goal Rationale

This measurable goal establishes a minimum commitment. Staff will likely attend more meetings and forums when the stormwater program can benefit from increased interaction with local NGOs.

2.3. Involve the General Public and Stakeholders in Managing the SWMP

2.3.1. Public forums on SWMP

Benton County is prepared to participate in annual public forums to discuss progress on implementation, to receive focused input, and to answer questions from the public.

Rationale

An annual evaluation of how the program is working, both on the part staff and the public provides a structured way in which to solicit input and disseminate information. Participation in annual public venues (e.g. County Fair, Arbor Day Celebrations) may occur in addition to or in place of a single public forum that is only dedicated to stormwater, in case of low turnout at these events.

Measurable Goal(s)

- ✓ Hold and participate in public events and forums advertised in the newspaper and with invitations sent out through watershed councils and similar organizations.

Goal Rationale

Encouraging public participation increases transparency, instills a sense of ownership and stewardship, and garners valuable input from the public toward improving the program.

2.3.2. Stakeholder Committees to Review SWMP Changes

Benton County has convened stakeholder committees for 2023 Phase II implementation. Input from public forums, complaints and concerns raised by the public, and insights from previous years' implementation efforts are to be organized and combined to create an outline of potential future modifications to the SWMP, for 2022 and beyond. The purpose of government and public stakeholders' committees are to provide input on these potential modifications, and provide suggestion for additional ideas or mechanisms of implementation. Recommendations will be forwarded to Department Directors.

Rationale

- Involving the public improves the quality of the final product and ensures a cross-disciplinary review of proposed program elements.
- Providing stakeholders with a structured means to provide input toward a final programmatic product improves the quality of that product.

Measurable Goal(s)

- ✓ Submit proposed modifications to SWMP, including the recommendation of the stakeholder committees to Department Directors for review, comment and/or approval prior to Phase II implementation, and every five years thereafter.

Goal Rationale

Encouraging public participation in a stakeholders' group aids to increase transparency, instills a sense of ownership in the program, and garners valuable input from the public toward improving the program.

2.3.3. Public Posting of SWMP Final Draft Language Prior to Implementation

Once a finalized draft of the SWMP is completed it will be posted on the County website along with a final call for review and comment through a public notice. Staff will answer questions from the public and receive input on the proposal.

Rationale

- Involving the public in the final phase of SWMP revision will improve the quality of the final product and ensures a cross-disciplinary review of proposed program elements.
- Providing stakeholders with a structured means to provide input toward a final programmatic product improves the quality of that product.

Measurable Goal(s)

- ✓ Public Notice and final call for comments and documentation of response.

Goal Rationale

Encouraging public participation to review the final product will increase transparency, instill a sense of ownership in the program, and garner valuable input from the public toward improving the program.

CM 3. Illicit Discharge Detection & Elimination (IDDE)

Primary Goals: To improve the quality of stormwater reaching waters of the State by identifying and eliminating non-stormwater discharges into Benton County's stormwater system.

3.1. Identify Affected Elements of the Stormwater System

3.1.1. Update Stormwater System Map

A comprehensive County infrastructure geodatabase is currently under construction. Stormwater features, including catch basins, culverts and known outfalls, are included in the geodatabase. These stormwater features are mapped to show proximity to natural streams and rivers and to show presence within the MS4 boundary. The geodatabase and resultant maps complement the **City of Corvallis** Storm Sewer System Map and the **City of Philomath** Storm Sewer Map.

Rationale

An actively-managed geodatabase of Benton County's stormwater systems assists the County in tracking stormwater in general and illicit discharges in particular.

A geodatabase, digital inventory and associated maps also help County staff to conceptualize the stormwater system and its inter-connections with other jurisdictions (particularly the Cities of Corvallis and Philomath).

Measurable Goal(s)

- ✓ A complete and printable map, updated over time and generated by actively-managed GIS data.

Goal Rationale

Data updates occur in both printed and digital (GIS) formats. The GIS app (digital) version is the form most often used by staff, while a printed copy is a useful tool for obtaining an overall picture of the system. Printed copies are generally submitted with the annual MS4/NPDES report.

3.2. Implement Illicit Discharge Ordinance and Enforcement Program

3.2.1. Enforcement Program

Benton County will implement Benton County Code standards and procedures for handling illicit discharges into the County stormwater system. Code standards also define the County as the authority having the power to stop illicit discharges and take enforcement action against those responsible (see adopted Benton County Illicit Discharge ordinance)

Primary sources of concern include:

1. Improperly functioning septic systems;
2. Intentional discharges of graywater or sewage into the stormwater conveyance system; and

3. Illegal dumping.

The majority of the geographic area subject to the SWMP is served by individual on-site sewage disposal systems. These are of varying ages and conditions and occasionally a system will fail, allowing sewage to surface and, often, drain to the stormwater system.

In addition, there is one County service district providing municipal sanitary sewer to approximately 30 residences, and a private sewer system serving a manufactured dwelling park.

The County's stormwater system is primarily comprised of open ditches and drainage ways in rural settings. This factor reduces required monitoring and makes it less likely that an illicit connection or discharge will go unnoticed.

The Illicit Discharge System is an interdepartmental effort, led by the **Benton County Environmental Health Division**. Environmental Health investigates reports and complaints outside of the road right of way. **Public Works** road managers informally monitor the stormwater system for signs of illicit discharge and investigate reports or complaints within the right of way. **Community Development** staff assist with involving the public in updating the program and informing the public about the program requirements once they are in place.

Presently, there is an enforcement program and an ordinance in Benton County that addresses illicit discharges. The ordinance (ORDINANCE No. 2001-0243) was adopted within the Benton County Code (Chapter 36: Illicit (Non-Stormwater) Discharges). The enforcement procedures, remedies and sanctions corresponding with this ordinance have been developed and will be updated as required.

Rationale

- Non-stormwater discharges into the stormwater system can result in serious negative impacts to water quality in the receiving streams. Implementing and updating a program for identifying such discharges makes their detection much more likely. County Code standards and enforcement procedures enable the County to take necessary action to stop and mitigate illicit discharges.

Measurable Goal(s)

- ✓ Implement adopted Benton County Code standards and procedures for eliminating illicit discharges into the stormwater system.

Goal Rationale

Implementation of the adopted code provisions establishes a formal method for resolving illicit discharge issues and will improve the means of enforcement.

3.3. Detection and Enforcement

3.3.1. Implementation and Training of Procedures for Detecting Illicit Discharges and Conducting Inspections

County operations personnel can record any reported incidents using a Survey123 IDDE field application (Figure 1) as part of the investigation process. Public Works and/or Community Development Directors determine if DEQ should be notified. The party responsible for the illicit discharge is also contacted so that all parties can work together to stop the discharge.

The screenshot shows a mobile application interface for reporting an illicit discharge. At the top, there is a green header with the text "IDDE TRACKING". Below this, the title "Illicit Spill Investigation" is displayed in green. The main content area contains several paragraphs of instructions: "This survey is for illicit discharge investigation and documentation. Do your best to gather as much information as possible.", "The survey is divided into groups. Click the arrow next to the bold heading to collapse or expand that group of questions.", "Quality onsite photos are essential.", "Be sure that PW staff members are listed with accurate arrival and departure times.", "Your task is to investigate, while other PW crew members perform the abatement activities. You may assist the cleanup crew but this survey is your top priority. Assisting the PW crew may also include the proper use of PPE, please follow all safety measures." Below the instructions, there are three sections for data entry: "Survey start*" with a sub-instruction "Date and time this survey started." and two input fields (one for date, showing "8/5/2022", and one for time, showing "02:03 PM"); "Spill Start" with a sub-instruction "Record the date and time the spill started." and two input fields (one for date, showing "m/d/yyyy", and one for time, showing "hh:mm"); and "Spill Stop" with a sub-instruction "Record the date and time the spill stopped." and two input fields (one for date, showing "m/d/yyyy", and one for time, showing "hh:mm").

Figure 1. Screenshot of Benton County's Illicit Discharge Reporting App

Storm drains and streams at bridges are presently inspected by the Benton County Department of Public Works as part of routine bridge inspection performed every two years. Large culverts (greater than 3 feet diameter) are inspected every two years, or as a routine drainage maintenance or inspection activity.

Benton County Building Inspectors and Benton County Public Works Engineering Staff also monitor construction activities for erosion control.

The inspection of the receiving stream or documented stormwater discharge point is informally noted as part of routine activities that are already in place. Inspection procedures can be updated and documented as needed to verify the presence or absence of an illicit discharge.

As discussed in the public involvement section, the County has implemented a procedure for receiving and acting on volunteer monitoring information and complaints regarding stormwater quality. Information that implies a possible illicit discharge will be investigated followed by appropriate action pursuant to the County Code provisions adopted under Action 1 above.

Benton County has established similar policies with the **Cities of Corvallis** and **Philomath** for the sharing of information and the coordination of investigation/remediation of stormwater issues that cross jurisdictional boundaries.

Rationale

The County has neither the staff nor financial resources to establish a new comprehensive water quality monitoring program. Therefore, illicit discharge detection presently relies on County road maintenance staff, Building and Environmental Health inspections, and on information received from members of the public. Given the exposed nature of the County’s stormwater system, these methods of detection should be adequate for detecting most illicit discharges, especially the most egregious offenses.

Measurable Goal(s)

- ✓ Implementation of the written set of procedures for monitoring and investigating potential stormwater discharge issues. This includes procedures for staff monitoring and a written procedure for receiving, logging, investigating and responding to complaints.
- ✓ Timely investigation of complaints and other identified potential illicit discharges.
- ✓ An annual report of complaints received and action taken. All complaints and identified issues will be logged, along with the results of investigation and the action taken.

Goal Rationale

Written inspection and enforcement procedures ensure that all complaints are recorded and addressed in a standardized way. Annual reporting encourages completion of action on complaints, and enables consideration of trends. Together these goals establish an accountable and actionable procedure for responding to complaints.

3.3.2. Train Staff in the Identification and Remediation of Illicit Discharges

Benton County Public Works Road and Infrastructure maintenance crews involved in the Stormwater Program are trained to identify and report suspected illicit discharges. As appropriate, other Benton County staff will receive training on receiving possible illicit discharge complaints and logging and routing them to the appropriate staff for investigation and follow-up. Staff from the Environmental Health Division will also receive training in investigating suspected illicit discharges and working with the responsible party to achieve compliance.

Rationale

- Adequate training enables staff to respond to the requirements of this new program in the appropriate and efficient manner.

Measurable Goal(s)

- ✓ Staff who will be monitoring or investigating suspected illicit discharges will receive adequate training as required to effectively implement the program.

Goal Rationale

As Benton County Development Code changes or additional permit requirements occur, training will need to be provided to County Staff associated with the Stormwater Program. The effective date of updated regulations may be set out several months to allow time for staff to obtain necessary training.

3.4. Inform Affected Parties and the General Public about Illicit Discharges

3.4.1. Inform Public Employees, Businesses, and the General Public of IDDE Hazards

Benton County will continue to update and distribute an informational handout describing the negative impacts of inappropriate discharges and disposal. The information discusses Benton County’s Illicit Discharge Detection and Enforcement program, and lists ways to contact Benton County to learn more or to make a complaint.

Rationale

Information creates awareness and can change behavior, including increased reporting of illegal actions.

Measurable Goal(s)

- ✓ Updated informational handout materials as needed.
- ✓ Distribute illicit discharge informational handout materials to identified businesses most likely to involve discharges and waste disposal.
- ✓ Distribute the materials to County employees.
- ✓ Post the information on the County’s stormwater website.

Goal Rationale

These methods will provide both targeted and broad exposure to information about illicit discharges.

CM 4. Construction Site Runoff Control

Primary Goals: To reduce pollutants from construction activities within the Corvallis Urbanized Area by implementing a regulatory program enacted by ordinance. Procedures will include site plan review, site inspection, enforcement, and public input.

4.1. Implement Benton County Erosion and Sediment Control Code Requirements

4.1.1. Implement Erosion Control Standards, Policies and Enforcement Procedures

Benton County has developed, through a process involving stakeholders and the general public, a program for both immediate and long-term runoff control from development sites. The program was built around provisions to be added to the Benton County Development Code, but also included non-code policies and procedures. The program requires that erosion and sediment control plans be reviewed and approved by Benton County for any development action or series of actions that will disturb 10,980 square feet (1/4 of an acre) or more. For projects with cumulative disturbed area greater than one acre, within the permit area, Benton County will first refer applicants to DEQ to obtain construction stormwater permit coverage under the 1200-C program. For qualifying sites, the code provisions require an erosion and sediment control plan, with supporting drawings and details, a review of submittals, revisions as required by staff, and field verification through inspections. Updates to the erosion and sediment control plan may be required.

The standards for the Benton County erosion control regulations were developed from the following Erosion and Sediment Control Manuals (ESCM):

- Oregon Department of Transportation – “Blue Book”
- Oregon Department of Transportation – Erosion Control Manual

To facilitate the development and administration of a workable and acceptable program, Benton County has involved stakeholders at multiple levels of the Stormwater Program. Landowners, developers and contractors required to implement the Benton County OR DEQ permit requirements have been involved in the implementation discussion.

Benton County staff collaborate with stakeholders to help ensure that the adopted program is workable and successfully addresses local water quality issues. We will attempt to attain consistency between our program and the program of the City of Corvallis, including sole permitting authority so that developers and contractors do not have to work within multiple distinct regulatory systems.

As of March 1, 2023, Benton County’s construction site stormwater permit program includes all of Benton County, not just the urbanized area.

Implementation of any updated regulatory components begin immediately upon Benton County Development Code changes taking effect. Training and procedures are instituted prior to adoption (**see Section 3, below**), and educational materials will be prepared in draft form for distribution following adoption of the final program (**See Public Education and Outreach element, below**).

Rationale

- Benton County’s erosion and sediment control regulations apply to ground disturbances of ¼ acre or more as of March 1, 2023; projects disturbing 1 acre or more are referred to DEQ for additional permit requirements.
- The Benton County Development Code is the primary document regulating land use activities, including site development within the County. Adopting any updates to the erosion control requirements by ordinance into the Development Code will enable Benton County to enforce the standards.

Measurable Goal(s)

- ✓ Implement and update Erosion and Sediment Control ordinance and practices as required to improve consistency with cities.
- ✓ Continue work to ensure that Benton County is the sole permitting authority for ground-disturbing activities where Benton Erosion and Sediment Control requirements apply.

Goal Rationale

To reduce redundancy, permitting issues, and costs, Benton County has worked to maximize alignment of its stormwater requirements and standards with adjacent municipal jurisdictions. The requirement for both DEQ and Benton County permits and their respective fees remains an issue.

4.1.2. Update Procedures for Construction Site Plan Review

Stormwater permitting updates are incorporated into Benton County’s existing system of permitting as needed, which is procedurally simple. Building permits and land use applications are screened for activities that will disturb ¼ acre or more of land.

For qualifying projects under DEQ and Benton County NPDES permitting, review of Erosion and Sediment Control Plans (ESCPs) are conducted by Benton County Public Works Engineering staff.

Not all activities with ground disturbance of ¼ acre or more will be connected to a building permit or land use application; therefore, it will be important to continue to inform the affected public of the requirement to obtain an erosion control permit for qualifying activities. See CM 4, BMP 12 (below).

Rationale

- Current duties of Public Works engineers have been expanded to include review of erosion control and erosion and sediment control plans. It would make sense for the staff already involved in reviewing an activity to review the erosion control plan and implementation for that activity. This avoids duplication of effort and allows for recommendations to update permit requirements as needed.

Measurable Goal(s)

- ✓ Updates to permit and fee will be instituted in Benton County as required under State law and as needed to implement the program
- ✓ The interdepartmental policy will be updated, discussing which types of development activities will be reviewed by which department and how the fees for erosion control permits will be allocated.

Goal Rationale

The permit and fee need to be updated for fee intake and permit tracking to occur in an orderly fashion and respond to changing State requirements. Interdepartmental cooperation is necessary as the activities that trigger the erosion control permit process cross jurisdictions.

4.1.3. Training for Employees Involved in Inspections

Benton County will ensure that building inspectors and engineering staff have adequate training in erosion and sediment control measures. Additionally, Benton County planners will pursue educational opportunities regarding planning techniques that can reduce the impacts of development on water quality and quantity including Low Impact Development (LID).

Training for plan review, site inspection and construction oversight will be available through the Oregon DEQ, the Northwest Environmental Training Center, the Oregon Department of Transportation, and other resources. Benton County plans to train and/or certify Engineering as well as Planning and Building Inspection personnel at these and in-house training sessions.

Rationale

- Benton County already has adopted erosion control regulations in place; however, current staff receive regular updated training and refreshers in erosion control techniques and inspection. Additional trainings will ensure staff are knowledgeable and competent in implementing current Benton County erosion control requirements.

Measurable Goal(s)

- ✓ Staff will obtain training adequate for implementation of the erosion control regulations as updates to the erosion and sediment control program requirements occur.

Goal Rationale

Staff should have the knowledge consistent with current regulations and implement the regulations.

4.2. Respond to Complaints, Inspect, and Enforce Code Violations

4.2.1. Implement Compliance Enforcement and Inspection Protocols with Ordinance

Enforcement procedures (BCC Chapter 31 – Enforcement) have been updated including the means to prohibit and penalize illegal activity, rectify damage, and respond to complaints regarding violations.

Procedures for inspection of construction sites will be implemented as they match current code requirements. Similar to plan review, road- or subdivision-related erosion control is inspected by Engineering staff. Currently, the responsibility for building-permit-related erosion and sediment control review and inspection also falls to Engineering staff. It has been proposed that erosion and sediment control review and inspection be incorporated into the building review and inspection process.

Benton County reviews its Sediment and Erosion Control Program on an annual basis. If a pattern of deficiencies becomes apparent, Benton County will modify the Program as appropriate. Proposed modifications will be submitted to DEQ to ensure compliance with Phase II program requirements.

Rationale

- Inspection and enforcement are necessary to ensure the erosion control standards are followed during construction events.

Measurable Goal(s)

- ✓ Benton County will have inspection and enforcement procedures in place by the effective date of the erosion control Ordinance.

Goal Rationale

These critical elements of the program need to be in place for 2023 stormwater regulatory changes. This may require the Ordinance to have an effective date later than otherwise would occur.

4.2.2. Complaint Response

As discussed in the Public Involvement element, Benton County has established procedures for receiving and investigating complaints as well as reporting and escalating enforcement actions which will be updated as needed.

Rationale

- Information from the public is a highly valuable extension of any monitoring program. Continuous monitoring of all stormwater facilities is cost-prohibitive. Members of the public will often notice and report conditions that are not observed by County staff or monitoring.
- Explicit procedures for handling complaints increases the effectiveness of the program, and increases the public's confidence in the program.

Measurable Goal(s)

- ✓ Continued implementation of procedure for receiving, logging, investigating and responding to complaints.
- ✓ An annual report of complaints received and action taken in response to illicit discharge or pollution events.

Goal Rationale

Implementation of written procedure ensures that all complaints are recorded and dealt with in a standardized manner. An annual report encourages completion of action on complaints and enables consideration of trends. Together these goals will establish an accountable and actionable procedure for responding to complaints.

4.3. Inform Affected Public of Permit Requirements

4.3.1. Distribute Information about Activities which Require an Erosion Control Permit

As discussed in the Public Education and Outreach element, information about the Erosion Control Permit Program will be provided to construction operators and others. This will include the types of activities requiring permits, how to obtain the permits, and possibly a summary of the erosion control standards.

Rationale

- Phase II erosion control permit requirements will be new for Benton County beginning in 2023. Contractors and property owners will need to be informed that a permit from the County may be necessary prior to land-disturbing or construction activities. Informing the general public will also enable them to identify and report potential violations.

Measurable Goal(s)

- ✓ Benton County will distribute informational flyers to construction operators, and will make the flyers available to the general public through the County website and at the offices of Public Works and Community Development. The flyers will be distributed before the effective date of the erosion control ordinance and as required to ensure public awareness.

Goal Rationale

Affected parties should be made aware of new regulations prior to conducting activities that may be in violation of code requirements.

4.3.2. Inform Contractors of Training Opportunities

Benton County can provide interested contractors a set of resources for obtaining additional information and training regarding erosion and sediment control. This will include information on how to obtain additional informational materials, as well as future opportunities for training workshops as feasible.

Rationale

- Community outreach is an easily achieved public service, and providing contractors with resources enables them to meet regulations. In addition, providing resources ultimately improves compliance with permitting requirements and helps make the job of the building inspector and engineer easier if public awareness is increased around new regulations.

Measurable Goal(s)

- ✓ Training resources will be included with the flyers distributed to construction operators, and will be available on the County website and at County offices.

Goal Rationale

Training and resources are effective means for informing affected members of the public and increasing compliance.

CM 5. Post-Construction Runoff Control

Primary Goals: To reduce water quality impacts from the built environment, and maintain a minimum of 80% of pre-development runoff regimes over the long term.

5.1. Implement Structural Methods to Limit Pollution and Maintain Pre-Development Flow Regimes

5.1.1. Implement Standards for Storage, Detention, Filtration and Infiltration

Benton County has adopted standards for development activities to incorporate long-term methods for the storage and detention of stormwater, filtering out pollutants, and expediting stormwater infiltration into groundwater instead of being quickly directed downstream.

Standards developed by staff with review and input by the stakeholder committee (described in the Public Involvement element) are implemented for new development and redevelopment projects. Code amendments and hearings before the Benton County Planning Commission and the Benton County Board of Commissioners will occur before implementation.

Rationale

- Runoff from completed subdivisions and large commercial, industrial or civic developments can carry substantial pollutant loads and can dramatically increase peak flows.
- Properly designed facilities can reduce pollutant loads discharged to water bodies, and can cause discharge flows to mimic those of pre-development site conditions.

Measurable Goal(s)

- ✓ Implementation of Development Code standards adopted by the Board of County Commissioners.

Goal Rationale

Implementing Post-Construction code standards ensures that new control measures are mandatory and enforceable in Benton County.

5.1.2. Implement a Long-Term Stormwater Plan for Maintenance of Installed Facilities

Once installed, storage, detention, filtration and infiltration facilities will require long-term maintenance and monitoring as outlined by Erosion and Sediment Control Plans developed prior to ground disturbance and construction. Benton County will implement policies and procedures, including binding agreements specifying who bears responsibilities for maintenance and adaptive management of such facilities. Some facilities may be the County's responsibility. While Benton County will be maintaining certain stormwater detention and retention facilities, responsibilities for others may fall to homeowners' associations, developers, or other property owners and jurisdictions.

Benton County will utilize project tracking and assessment procedures to monitor ongoing and completed projects that qualify for inspection, as well as document maintenance, repair and monitoring activities in its annual NPDES report to OR DEQ.

Rationale

- Clear responsibility for long-term monitoring and maintenance of facilities will ensure facilities continue to function and do not create hazards or fail over time.
- Adaptive management of such facilities may be necessary in order to meet water quality standards.

Measurable Goal(s)

- ✓ Implementation of a set of policies and procedures, endorsed by the Board of County Commissioners, for a long-term monitoring plan and associated maintenance of stormwater facilities.

Goal Rationale

Consistently implementing formal policies for these facilities will improve consistency in dealing with issues and insufficiencies as they arise, lending to long term success.

5.1.3. Training for Plan Review and Field Inspection Procedures

To implement the Development Code requirements called for under Action 1 (above), Benton County ensures adequate training for individuals reviewing site development plans and inspecting building sites. Future trainings may be a joint effort with the **City of Corvallis** and/or the **City of Philomath**.

Rationale

Proper training will ensure staff has the expertise to evaluate the site conditions and stormwater management techniques employed on a given site.

Measurable Goal(s)

- ✓ Staff who will be reviewing or inspecting stormwater facilities will have received adequate training of the adoption of Development Code standards.

Goal Rationale

It is necessary for staff to understand exact standards in the Development Code so that they may assess and act on issues of non-compliance. Appropriate training opportunities match current code requirements and are kept up-to-date to include training for specific areas for improvement determined by staff.

5.2. Implement Standards to Limit Pollution and Maintain Flow Regimes

Benton County staff and/or consultants will implement site design standards that encourage or require development activities to avoid or minimize modification of sensitive areas, including utilization of low impact development. Benton County is working to identify and reduce potential barriers to low impact development with the implementation of the current NPDES permit.

Rationale

- Development that avoids or minimizes impacts to steep slopes, wetlands, erosive soils, drainages and other sensitive areas have less likelihood of degrading water quality and will be more cost effective over time.
- The standards and emphasis on LID will help protect sensitive areas and direct intensive activities to areas that can absorb the impacts of development and help maintain pre-development flow regimes.

Measurable Goal(s)

- ✓ Implement site design standards adopted in the Development Code.

Goal Rationale

Implementing site design standards in the Development Code will make them mandatory and enforceable, and will integrate erosion and sediment control design standards with other existing standards applicable to site development.

5.2.1. Implement Regulations to Maintain Natural Filtration and Water Retention

Inside the Corvallis Urban Growth Boundary, **Benton County** and the **City of Corvallis** have collaboratively adopted regulatory protections for wetlands and riparian areas. The County will implement complementary development limitations for riparian and wetland areas outside the UGB. The proposed regulations will be considered by the Benton County Planning Commission and Board of Commissioners at public hearings. Staff will implement adopted riparian and associated wetland protections and/or programs to support and improve natural ecosystem functions improving stormwater management and water quality.

Stormwater quality and quantity requirements have been established to ensure that at minimum 80 percent of suspended solids are removed prior to offsite discharge. Retention goals will focus on meeting pre-construction or natural surface hydrological function.

Benton County has chosen not to accept alternative mitigation measures as in lieu of post-construction stormwater management. The options outlined in the permit were determined to be too difficult and expensive to implement given the anticipated demand for these options. The mitigation options may be offered in future iterations of the SWMP if their implementation is deemed practical.

Rationale

- Beyond their ecological importance, natural wetlands and riparian areas have tremendous capacity to filter pollutants from runoff and to detain and retain water during high-flow periods. Preserving these resources in their natural condition is highly beneficial to stormwater quality and quantity.

Measurable Goal(s)

- ✓ Implement Development Code and/or associated program for riparian and wetland protection for areas outside the Corvallis Urban Growth Boundary.

Goal Rationale

These protections and/or program would complement existing protections applicable inside the UGB. Adopting these provisions into the Development Code will make them mandatory and enforceable along with a non-regulatory, education and outreach program to support riparian and wetlands functions to improve stormwater management and water quality.

5.2.2. Implement Policies and Site Plans that Limit Future Impervious Surfaces

Policies in the Benton County Comprehensive Plan guide adoption and revision of Development Code provisions, zoning, and infrastructure and area plans. Benton County will prioritize less-sensitive areas in the siting of development (impervious surfaces, in particular). Additionally, policies and plans will be directed toward reducing the total impervious surface needed to achieve development of an area. Numerous case studies are available which demonstrate ways in which impervious surface can be minimized while achieving desired development density.

In particular, sites that create or replace ¼ acre or more of new impervious area are required to implement stormwater controls at all qualifying sites; a site-specific stormwater management approach targeting natural surface or pre-development hydrological function via long-term operation and maintenance of stormwater controls; and long-term operation and maintenance of stormwater controls at project sites that are under the ownership of a private entity.

Sites that disturb more than one acre, or are part of a Common Plan of Development disturbing more than one acre, are subject to an OR DEQ 1200-C permit prior to application for a Benton County ESC permit and work commencement.

Rationale

- Impervious surfaces decrease natural infiltration and increase the speed of runoff delivery to streams, increasing peak flows, which contribute to flooding and erosion. Impervious surfaces also collect pollutants, which are then carried by stormwater into the stormwater system. Reducing impervious surfaces in a watershed reduces these impacts.
- Water quality impacts can also be reduced by concentrating impervious surfaces in portions of the watershed where land is stable and where slowing and filtering of runoff can occur before stormwater enters streams.

Measurable Goal(s)

- ✓ Update Comprehensive Plan policies directing long-range planning efforts to minimize impervious surface and site impervious surfaces in the less-sensitive portions of the watershed.

Goal Rationale

The Comprehensive Plan is the policy document that will guide future planning. Updating policies now will ensure these considerations are made a high priority when future area planning and/or Development Code amendments are considered.

5.2.3. Long Term Education and Outreach on Stormwater Pollution for Non-Construction Sector Constituents

Education and outreach are key to long-term stormwater management. The education and outreach element of the SWMP will include a focus on reducing pollutant loads and stormwater discharges from individual properties as well as on a watershed scale.

Rationale

Regulations can go only so far. The actions of individuals over time have substantial impact on stormwater quality and quantity. Providing information on these impacts and encouraging people to make certain choices can influence actions in a positive direction.

Measurable Goal(s)

- ✓ Implement education and outreach program (see Public Education section of this report).

Goal Rationale

The education and outreach program is designed to encourage changes in behavior on the part of the general public. Implementation of the program will provide people with information about the consequences of individual decisions upon pollutants and stormwater discharges.

CM 6. Pollution Prevention and Good Housekeeping

Primary Goals: Benton County will create and implement a Pollution Prevention Program (PPP) to reduce or prevent pollutant runoff from county activities within the MS4 areas.

6.1. Inventory MS4 Operations and Facilities

6.1.1. Identify All County Infrastructures within the MS4 Area

Rationale

This ongoing BMP ensures that all municipal separate storm sewer system locations are identified, documented and mapped through the GIS department. Most of Benton County is outside the MS4 area, which and this will help define the scope of the program.

Measurable Goal(s)

- ✓ Printed maps and associated georeferenced data of all County roads, bridges, culverts, buildings, fleet maintenance shops, storage areas and parks. Overlay locations with mapping of stormwater drainage and waterways that would be impacted by runoff events.

Goal Rationale

Due to limited funding and resources, the primary focus will be on the areas of the MS4 with the ability to expand the program in the future.

6.1.2. Identify County Maintenance Activities which May Impact Water Quality within the MS4 Area and Develop an Updated BMP Document

Rationale

Many of the BMP's developed will be adopted into Benton County's Pollution Prevention Program. However, there are other activities that have the potential to impact water quality. Examples of this include parking lots at County buildings, vegetation management, road work, fleet maintenance, etc. The updated BMP document will be adopted into the Pollution Prevention Plan and available to County personnel who perform these activities.

Measurable Goal(s)

- ✓ Typical maintenance activities for each County department (Road Maintenance, Facilities Maintenance, Fleet Maintenance, and Natural Areas, Parks and Events) have been reviewed by staff for determination on impacts to water quality. An updated BMP document (2022) has been composed around listed activities to reduce impacts on water quality and other natural and cultural resources.

Goal Rationale

To ensure that all major areas of County development, construction, and maintenance activities have been evaluated and BMP's implemented, which will prevent undue impacts to water quality as well as other natural and historical resources.

6.1.3. List Contractors for County Maintenance Activities under the Pollution Prevention Program (PPP)

Rationale

The BMP's implemented extend outside County maintenance personnel. Contracts and/or intergovernmental agreements will need to adopt language consistent with County BMP's.

Measurable Goal(s)

- ✓ Review outside contracts and agreements annually.
- ✓ Implement contract language specific to BMPs.

Goal Rationale

To ensure that other agencies/vendors understand and comply with Benton County's Pollution Prevention Program (PPP).

6.2. Implement a Pollution Prevention Program

6.2.1. Include BMP's Developed for Salmon Recovery as a Component of the PPP

Rationale

BMPs directed towards salmon recovery have shown to be effective in reducing some of the pollutants in stormwater runoff typical from maintenance operations. This allows Departments with limited County staff to focus on developing and implementing other County-specific BMP's to improve water quality.

Measurable Goal(s)

- ✓ Annotate BMPs that have direct implications for salmon and fish passage within the BMP document.
- ✓ Continued line of communication with ODFW and NMFS in regards to fish habitat and areas of concern for salmon as it relates to water quality.
- ✓ BMP's will be reviewed periodically as new and improved methods are adopted throughout the State.

Goal Rationale

To ensure that updated information is being considered and evaluated in relation to stormwater and water quality issues that impact salmon.

6.2.2. Develop Additional BMPs to Meet Program Requirements

Rationale

BMPs for additional County activities aside from road maintenance ensure maximum compliance and stewardship while conducting Benton County activities. This includes Fleet, Parks and Facility Maintenance.

Measurable Goal(s)

- ✓ A comprehensive BMP document for County maintenance and construction activities.
- ✓ Distribution and review of the BMP document by Department Directors.
- ✓ Review of the BMP document by the stormwater stakeholder committee and implementation into the PPP within the scheduled timeline.

Goal Rationale

Involving other County departments in BMP development will increase ownership and compliance to the program. Additionally, by putting forth effort to comply with NPDES stormwater requirements and best practices, Benton County will set positive example as a leading party implementing new DEQ permit measures.

6.3. Conduct Employee Training Program

6.3.1. Provide PPP Training to Public Works, Parks, Fleet and Facilities Maintenance Personnel

Rationale

Training and educating staff on the PPP and the BMPs will establish consistency with the program and promote awareness. Training is also required for all staff taking part in implementation and enforcement of Phase II OR DEQ permit requirements.

Measurable Goal(s)

- ✓ Training will be implemented for all current Public Works, Parks, and Fleet and Facilities Maintenance personnel once the PPP is in place. An annual refresher course will be conducted to review new information, improved practices and capture new employees required to follow BMPs and ensure that all staff are properly trained on stormwater pollution prevent.
- ✓ New staff with duties related to erosion and sediment control measures, or MS4 maintenance, will be trained within 30 days after hire on these measures.

Goal Rationale

Meets the requirement that all employees receive the training, both for Phase II implementation and for individual departments' compliance with the SWMP.

6.3.2. Empower Field Staff to Use Good Judgment In-Line with the PPP BMP's

Rationale

Training of personnel and encouraging suggestions and contributions to BMPs allows personnel to use good judgment in the field when applying techniques to reduce runoff as outlined in this program.

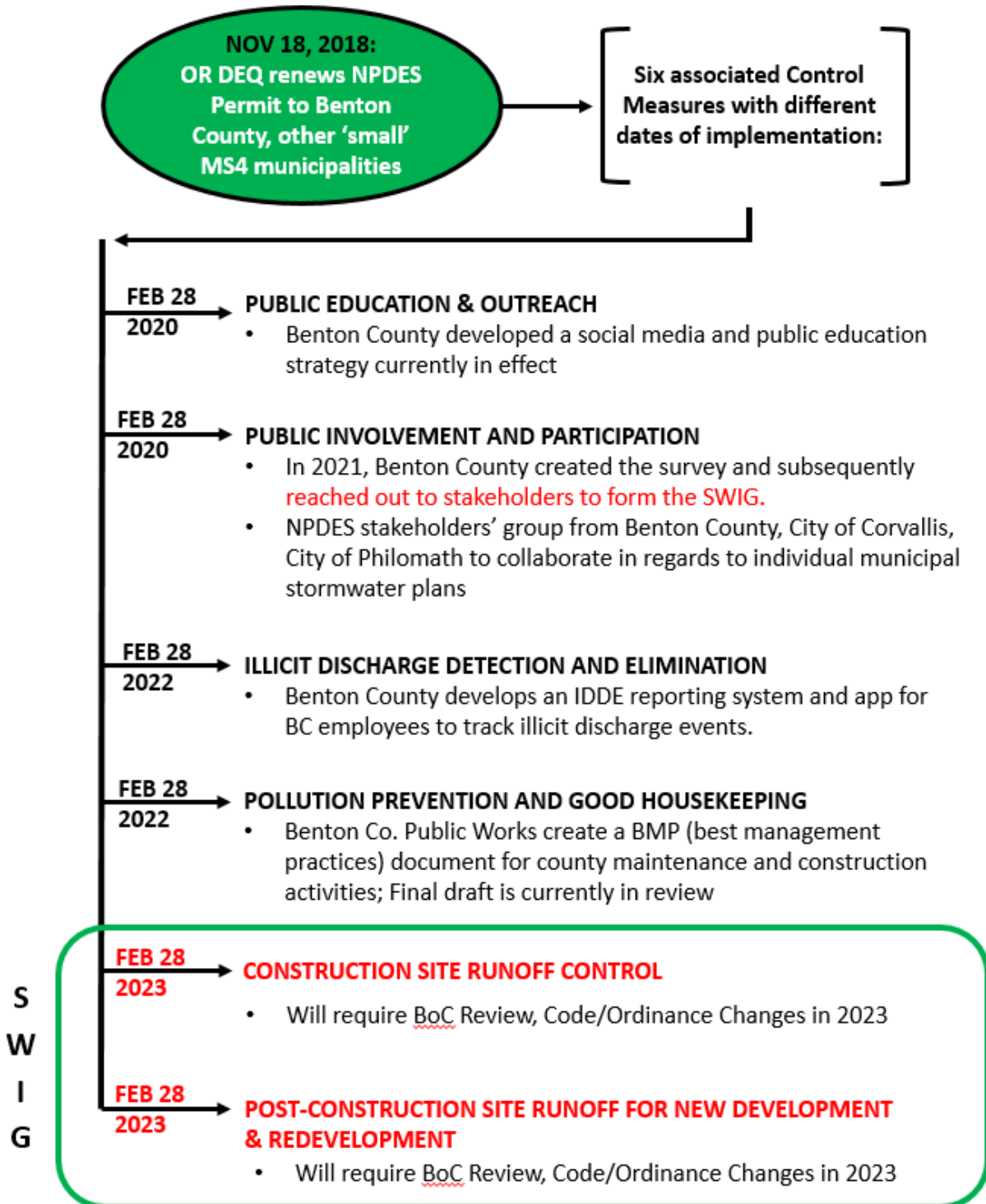
Measurable Goal(s)

- ✓ Provide employees with the proper tools, equipment and flexibility to meet the demands of their job while complying with the requirements of the PPP.

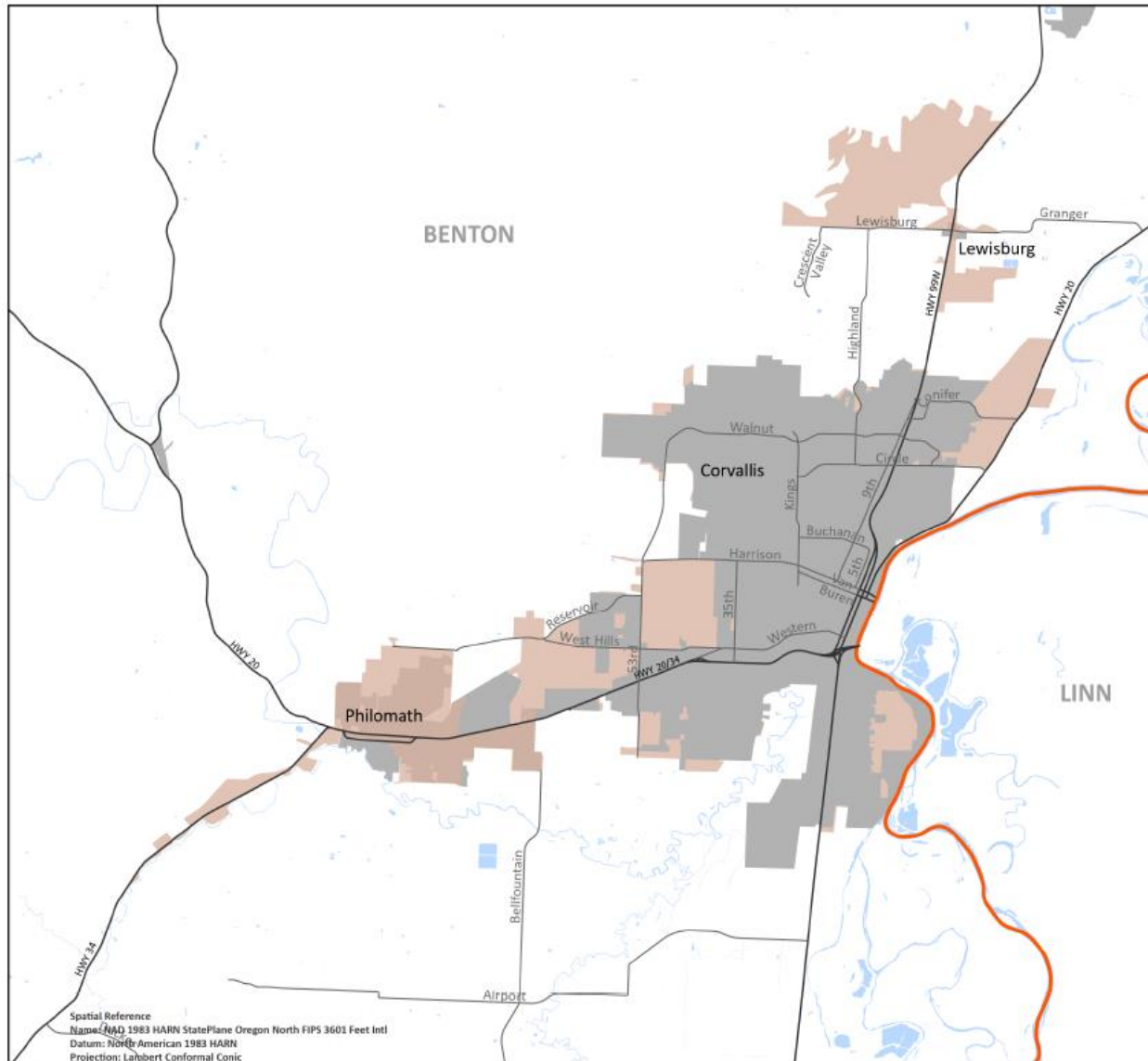
Goal Rationale

Field and management personnel are well-equipped to provide input on the BMPs effectiveness within the program and will improve the document by providing informed recommendations. Encouragement to provide constructive feedback also increases staff buy-in, participation, and understanding of requirements.

APPENDIX A: IMPLEMENTATION TIMELINE



APPENDIX B. BENTON COUNTY MS4 BOUNDARY MAP

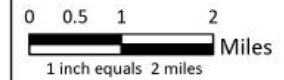


Benton County Stormwater MS4 Boundary

Urbanized Area outside of Corvallis city limits 2010 Census



- MS4 Boundary 2010
- Highways
- Arterial Roads
- Cities
- Water Bodies
- Benton County



SOURCE:
US Census Bureau, 2010 Census,
TIGER data.
Date Saved: 10/28/2019 2:39 PM

Spatial Reference
Name: NAD 1983 HARN StatePlane Oregon North FIPS 3601 Feet Intl
Datum: North American 1983 HARN
Projection: Lambert Conformal Conic