

# City of Brookings

## MEETING AGENDA

### **CITY COUNCIL**

**Monday, May 13, 2019, 7:00pm**

City Hall Council Chambers, 898 Elk Drive, Brookings, OR 97415

*The City Council will meet in **Executive Session at 6:00 PM**, in the City's Manager's office, under the authority of ORS 192.660(2)(d) "To conduct deliberations with persons designated by the governing body to carry on labor negotiations" and ORS 192.660(2)(e) "To conduct deliberations with persons designated by the governing body to negotiate real property transactions."*

### **CITY COUNCIL**

#### **A. Call to Order**

#### **B. Pledge of Allegiance**

#### **C. Roll Call**

#### **D. Ceremonies/Appointments**

1. 2020 Census Proclamation [Pg. 3]
2. Appointment of Bonnie Jordan to Budget Committee [Pg. 4]

#### **E. Oral Requests and Communications from the audience**

(Public Comments on non-agenda items – 5 minute limit per person.\*)

#### **F. Consent Calendar**

1. Approve Council minutes for April 22, 2019 [Pg. 7]
2. Accept Planning Commission minutes for March 5, 2019 [Pg. 10]
3. Reschedule May 27 Council Meeting to May 28, 2019
4. Resignation of Bridgette Eszlinger from Budget Committee

#### **G. Staff Reports**

1. Accepting wastewater septic tank contents from Roto Rooter [PWDS, Pg. 11]
  - a. (Draft) Letter Agreement between City of Brookings and Roto Rooter [Pg. 12]
  - b. Jacobs Concerns and Recommendations [Pg. 14]
  - c. EPA documents submitted at June 12, 2017 meeting [Pg. 16]
2. Letter of Support for Advanced Health [City Manager, Pg. 29]
  - a. Draft Letter [Pg. 30]
3. Yard of the Month [City Manager, Pg. 31]

#### **H. Informational Non-Action Items**

1. April Vouchers [Pg. 32]
2. Committee Vacancies [Pg. 35]

#### **I. Remarks from Mayor and Councilors**

#### **J. Adjournment**

\*Obtain Public Comment Forms and view the agenda and packet information on-line at [www.brookings.or.us](http://www.brookings.or.us), at City Hall and at the local library. Return completed Public Comment Forms to the City Recorder before the start of meeting or during regular business hours.

All public meetings are held in accessible locations. Auxiliary aids will be provided upon request with at least 72 hours advance notification. Please contact 469-1102 if you have any questions regarding this notice.

# City of Brookings *Proclamation*

**WHEREAS**, the Bureau of the Census in the United States Department of Commerce conducts the census and the federal government funds the cost of the census; and

**WHEREAS**, it takes the cooperation and investment of states, local government, and community partners working in conjunction with the federal government to ensure that the census is fully executed and represents a complete and accurate count of the people within each jurisdiction; and

**WHEREAS**, the results of the census are the foundation for many important decisions made by federal, state, and local government including the disbursement of federal funds to states, counties, and municipalities; and the apportionment of political representation based on population; and

**WHEREAS**, census data guides local decision-makers in important community planning efforts, including locations for schools, roads, hospitals, child-care and senior citizen centers, et cetera;

**NOW, THEREFORE**, the City Council of the City of Brookings hereby proclaims its support for the efforts of the

## **2020 CENSUS AND CALLS UPON THE COMMUNITY TO PARTICIPATE**

**BE IT FURTHER RESOLVED**, that the City Council calls on city officials, community leaders, representatives of faith-based and non-profit organizations, and representatives of historically undercounted populations to ensure that the City of Brookings is properly and fully counted in the 2020 census.

**In Witness Whereof**, I, Mayor Jake Pieper, do hereto set my hand and cause the official seal of the City of Brookings, Oregon, to be affixed this 13th day of May, 2019.

\_\_\_\_\_  
Mayor Jake Pieper



RECEIVED

MAY 03 2019



CITY OF BROOKINGS

898 Elk Drive, Brookings, OR 97415

Phone: 541-469-2163 Fax: 541-469-3650

www.brookings.or.us

# City of Brookings

## APPLICATION TO SERVE ON A COMMISSION OR COMMITTEE

### PART I Contact Information:

Applicant Name: Bonnie Jordan

Physical Address: 96048 Eggers Rd, Brookings, OR 97415

Mailing Address: P.O. Box 1512, Brookings, OR 97415

Email Address: bonniejordan@umpquabank.com Phone: (541) 961-6553

### PART II Position Selection, Requirements and Restrictions: (Please answer all that apply)

- | 1. Commission/Committee applying for:   | <u>Composition (i)</u>   | <u>Term (ii)</u> |
|---|--------------------------|------------------|
| <input type="checkbox"/> Planning Commission/Commission for Citizen Involvement (iii) | 5 Electors, 2 UGB        | 4 years          |
| <input checked="" type="checkbox"/> Budget Committee                                  | 5 Electors               | 3 years          |
| <input type="checkbox"/> Parks and Recreation Commission                              | 4 Residents, 1 UGB       | 2 years          |
| <input type="checkbox"/> Tourism Promotion Advisory Committee (TPAC) (iii)            | 4 Residents, 3 Curry Co. | 3 years          |
| <input type="checkbox"/> Other (please specify): _____                                |                          |                  |
2. City residents: How long have you lived in the City of Brookings? \_\_\_\_\_ years \_\_\_\_\_ months  
*Planning & Budget Applicants Only:* Are you a City elector (registered voter)?  Yes  No
3. UGB residents: How long have you lived in the UGB? 4 years 10 months
4. What is your current occupation? Bank Manager

#### NOTES:

- (i) *Membership requirements:*
  - Residents must reside inside City limits; resident/UGB status determined by physical address.
  - Electors are registered voters of the City of Brookings (verified by County Elections Office).
  - UGB members must reside within the Brookings Urban Growth Boundary (contact the Planning Department at 541-469-1137 for assistance in determining UGB status).
- (ii) *Term:* Appointments to fill mid-term vacancies will be for the remainder of that term.
- (iii) *Other restrictions:*
  - Planning Commission: No more than two (2) Commissioners may be principally involved, as individuals, members or partners, in the buying, selling or development of real estate for profit. No two (2) members shall be involved in the same kind of business or profession.
  - TPAC: The three (3) Curry Co. members must own property, own a business or be employed in the City.

**PART III Background Information:** (Attach additional pages if needed)

1. List your related experience and/or background to the position you are applying for:

Moved to Brookings in May 1994.  
Have been in banking for 15 years and ~~also~~ have had my own small business, and helped run two others.

2. List any unrelated work history, educational background, and volunteer experience you may have:

I've been a member of the Chamber board in the past and the Treasurer of the Rotary Club for over 5 years.

3. Briefly describe your interest in this position and what you hope to accomplish:

Truth be told - money interests me. I think it will be fascinating to see how a City's budget is created.

**PART IV Volunteer Agreement:** *Please read and check off the following before signing:*

- I acknowledge that I will not be under the direct supervision and control of the City in connection with the voluntary services for which I have applied.
- I acknowledge that I will receive no compensation or expense reimbursement from the City in connection with any volunteer services for which I have applied.
- I understand and agree that my volunteer service will be donated to the City at times other than my regular work hours.
- I understand that if the position I applied for requires me to be an elector of the City of Brookings, that the City has permission to verify my status as a registered voter.
- I agree to release the City from all matters relating to the voluntary service for which I have applied, including compliance, if any is required, with social security, withholdings, insurance and all other regulations and reportings governing such matters. I assume full responsibility for any injuries or damages suffered by or arising from the voluntary service described herein. (*Planning Commission applicants, see \*\* below*)
- I agree to release, indemnify and hold the City harmless from and against any and all actions, causes of action, claims, demands, liabilities, losses, damages or expenses, of whatsoever kind and nature, including attorney fees, which City may sustain or incur as a result of errors or omissions in the performance of the voluntary service set forth herein.
- By signing this application voluntarily, I, the Applicant, do hereby acknowledge that I have read and agree to the terms stated above and that I understand and acknowledge that this document will become public information and may be distributed to the public and news media as part of a City Council Agenda Packet.

Bonnie Jordan

Applicant (print name)



Applicant's Signature

5/2/19

Date

**\*\*Planning Commissioners holding office on April 1<sup>st</sup> of each year are required to file an Annual Statement of Economic Interest with the Oregon Government Ethics Commission (OGE). You may view a sample form at [http://www.oregon.gov/ogec/docs/sei/sei-11 form sample only for website.pdf](http://www.oregon.gov/ogec/docs/sei/sei-11_form_sample_only_for_website.pdf). Official forms provided by OGE.**

Submit completed applications by mail or in person to the City Recorder, 898 Elk Drive, Brookings, OR 97415. Regular business hours are 9 am to 4:30 pm, Monday – Friday.

**Commission and Committee contact information:**

- Planning Commission: 541-469-1103 - [lziemer@brookings.or.us](mailto:lziemer@brookings.or.us)
- Budget Committee: 541-469-1123 - [jhoward@brookings.or.us](mailto:jhoward@brookings.or.us)
- Parks and Recreation Commission: 541-469-1103 - [lziemer@brookings.or.us](mailto:lziemer@brookings.or.us)
- Tourism Promotion Advisory Committee: 541-469-1103 - [lziemer@brookings.or.us](mailto:lziemer@brookings.or.us)

**City of Brookings**  
**CITY COUNCIL MEETING MINUTES**  
City Hall Council Chambers, 898 Elk Drive, Brookings, OR 97415  
**Monday, April 22, 2019**

**Call to Order**

Mayor Pieper called the meeting to order at 7:02 PM.

**Roll Call**

Council Present: Mayor Jake Pieper, Councilors Bill Hamilton, Brent Hodges, Ron Hedenskog, and John McKinney; a quorum present.

Staff present: City Manager Janell Howard, City Attorney Martha Rice, Public Works and Development Services Director Tony Baron, Deputy Public Works and Development Services Director Jay Trost and Deputy Recorder Rita Ritz.

Media Present: Jane Stebbins of Curry Pilot

Others Present: Approximately six audience members

**Oral Requests and Communications from the audience**

No one from the audience addressed Council on non-agenda items.

**Consent Calendar**

1. Approve Council minutes for April 8, 2019
2. Accept TPAC Committee minutes for March 14, 2019
3. Receive monthly financial report for March 2019

**Councilor Hedenskog moved, Councilor Hamilton seconded and Council voted unanimously to approve the Consent Calendar.**

**Staff Reports**

*Ratify all April 8<sup>th</sup> Council Meeting Decisions*

City Manager Howard presented the staff report.

**Councilor Hedenskog moved, Councilor McKinney seconded and council voted unanimously to ratify and approve all actions taken at the previous City Council meeting dated April 8, 2019.**

*Waive Wild Rogue Relay*

Deputy Public Works and Development Services Director Trost presented the staff report.

**Councilor Hedenskog moved, Councilor Hodges seconded and Council voted unanimously to authorize the City Manager to waive park use fees and deposits associated with services provided in support of the Wild Rogue Relay 2019 event.**

*Riparian Protection Overlay Zone Ordinance*

Public Works and Development Services Director Baron presented the staff report.

Councilors discussed details of the Riparian Protection Overlay Zone ordinance.

Mayor Pieper opened the Public Hearing at 7:10 p.m.

With no one present wishing to address Council regarding the item, Mayor Pieper closed the Public Hearing at 7:12 p.m.

**Mayor Pieper moved, to approve File No. CP-1-18 establishing a Riparian Protection Overlay Zone and accompanying standard for the City of Brookings consistent with Oregon Statewide Planning Goal 5 Riparian Safe Harbor Inventory Procedures and Goal 5 Safe Harbor Protection. No second followed. Motion failed.**

**Councilor Hedenskog moved, Councilor Hodges seconded and Council voted unanimously to approve File No. CP-1-18 establishing a Riparian Protection Overlay Zone, incorporating changes to paragraph IV section C to read: The measurement of distance to the riparian corridor boundary shall be from the ordinary high water line measured fifty feet along the slope.**

**Councilor Hodges moved, Councilor Hedenskog seconded and Council voted unanimously for Ordinance 19-O-776 to be read the first time in full.**

**Councilor Hedenskog moved, Councilor Hodges seconded and Council voted unanimously for Ordinance 19-O-776 to be read a second time by title only.**

**Council Hedenskog moved, Councilor Hodges seconded and Council voted unanimously to adopt Ordinance 19-O-776, with the amendment as read by Tony Baron, "The measurement of distance to the riparian corridor boundary shall be from the ordinary high water line measured fifty feet along the slope."**

*Contract with Ausland Group for City Hall Seismic Retrofit project*

City Manager Howard presented the staff report.



**Councilor Hedenskog moved, Councilor McKinney seconded and Council voted unanimously to authorize the City Manager to enter into an agreement with Ausland Group as the prime contractor for the City Hall Seismic Rehabilitation project.**

*City Hall Seismic Retrofit – Additional Roof Repair*

Public Works and Development Services Director Baron presented the staff report.

**Councilor Hedenskog moved, Councilor McKinney seconded and Council voted unanimously to authorize the City Manager to enter into an agreement with WRK Engineers and Ausland Group to perform additional roof repair work at City Hall during the seismic retrofit project.**

*Fund Allocation for 4<sup>th</sup> of July – Family Fun Festival*

City Manager Howard presented the staff report.

Barbara Ciaramella of North Bank Chetco River Road informed Council of the wonderful events that are planned for this first year event.

**Councilor Hodges moved, Councilor Hedenskog seconded and Council voted unanimously to allocate a total of \$5,000 to the Fun'd the 4<sup>th</sup> event committee for the 4<sup>th</sup> of July – Family Fun Festival event. \$2,500 to be disbursed in May 2019 and \$2,500 to be disbursed after July 1, 2019.**

**Remarks from Mayor and Councilors**

Councilor Hedenskog remarked that he had attended the Memorial Service for Ron Fallert and he estimates that there were well over 300 people who attended.

Mayor Pieper asked for a proclamation regarding the 2020 Census to be brought forth.

**Adjournment**

Councilor Hedenskog moved, Council Hamilton seconded and all Councilors in favor. Mayor Pieper adjourned the meeting at 7:55 p.m.

Respectfully submitted:

ATTESTED:  
this 13th day of May 2019:

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Jake Pieper, Mayor

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Janell K Howard, City Recorder

## BROOKINGS PLANNING COMMISSION MINUTES

March 5, 2019

### CALL TO ORDER

The regular meeting of the Brookings Planning Commission was called to order by Chair Wulkowicz at 7:00 pm in the Council Chambers at Brookings City Hall followed by the Pledge of Allegiance.

### ROLL CALL

Commissioners Present: Tim Hartzell, Skip Hunter, Clayton Malmberg, Cheryl McMahan, Gerry Wulkowicz

Staff Present: PWDS Director Tony Baron, Planning Tech Lauri Ziemer

Others Present: 1 audience member

### PLANNING COMMISSION CHAIR PERSON ANNOUNCEMENTS - None

### PUBLIC HEARINGS

4.1 In the matter of File No. CUP-3-19, a request for approval of a Conditional Use Permit to operate a Short Term Rental facility at 16947 Parkview Drive.

There was no ex parte contact, bias, personal interest, or conflicts of interest declared and no objection to the jurisdiction of the Planning Commission to hear the matter. The public hearing was opened at 7:03 pm. PWDS Director Tony Baron reviewed the staff report.

The applicant Lie Tan was present and available for questions. No members of the public spoke in opposition and no participant requested additional time to submit materials. The public hearing was closed at 7:09 pm.

The Commission deliberated on the matter. **Motion made by Chair Wulkowicz to authorize a Conditional Use Permit to operate a Short Term Rental facility at 16947 Parkview Drive, a .26 acre parcel located on Assessor's Map No. 40-13-31CB; Tax Lot 01403, zoned R-1-6, based on the findings and conclusions stated in the staff report and subject to the Conditions of Approval; motion seconded by Commissioner Hartzell. By a 5-0 vote the motion carried.**

**Motion made Chair Wulkowicz to approve the Final Order as presented; motion seconded by Commissioner McMahan. By a 5-0 vote the motion carried.**

### MINUTES FOR APPROVAL

5.1 Minutes of regular Planning Commission meeting of February 5, 2019. **Motion made by Commissioner McMahan to approve the minutes as presented; motion seconded by Commissioner Hartzell. By a 5-0 vote the motion carried.**

### UNSCHEDULED PUBLIC APPEARANCES - None

**REPORT FROM THE PLANNING STAFF** – Tony Baron advised that the Riparian Ordinance will be going to City Council on March 25, 2019.

### COMMISSION FINAL COMMENTS - None

### ADJOURNMENT

Chair Wulkowicz adjourned the meeting at 7:12 pm.

Respectfully submitted,



Gerald Wulkowicz, Brookings Planning Commissioner

Approved at the May 7, 2019 meeting

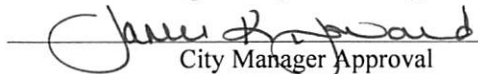
# CITY OF BROOKINGS

## COUNCIL AGENDA REPORT

Meeting Date: May 13, 2019

Originating Dept: PW/DS

  
\_\_\_\_\_  
Signature (submitted by)

  
\_\_\_\_\_  
City Manager Approval

---

Subject: Accepting wastewater septic tank contents from Roto Rooter at the Wastewater Treatment Plant

Recommended Motion: Authorize the City Manager to execute an agreement with Roto Rooter to accept septic tank contents for a three month trial period.

Financial Impact: Estimated revenue \$8,640 per month

Background/Discussion: In March 2017, Roto-Rooter requested approval to dispose of septic tank waste (septage) at the City of Brookings wastewater treatment plant (WWTP). City Council considered the matter at the June 12, 2017 meeting but tabled the decision pending more information regarding the impacts to the biology of the treatment plant.

Jacobs came on as the treatment plant operator in 2018 and has reviewed the request from Roto Rooter. Their concerns and recommendations are attached.

The attached draft agreement allows Roto-Rooter to dispose of septage at the WWTP for a trial period of 3 months. The agreement stipulates that the septage will be screened to remove inorganic matter and tested for pH before or during delivery to the WWTP. The agreement further stipulates that the septage may not interfere with the normal operation of the WWTP such that our 100% compliance status becomes compromised.

Staff has the authority to terminate the agreement immediately in the event that an odor control or biology problem arises.

Attachment(s):

- a. (Draft) Letter Agreement between City of Brookings and Roto Rooter.
- b. Jacobs Concerns and Recommendations
- c. EPA documents submitted at June 12, 2017 meeting



# City of Brookings

898 Elk Drive, Brookings, OR 97415  
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[pstevens@brookings.or.us](mailto:pstevens@brookings.or.us)

## PUBLIC WORKS AND DEVELOPMENT SERVICES DEPARTMENT

May 8, 2019

Roto Rooter  
Luke Pyke  
17498 Carpenterville Road  
Brookings, OR 97415

RE: Septic Disposal Proposal

Dear Luke:

Thank you for your letter of March 15, 2017 requesting the opportunity to dispose of domestic septage at the City of Brookings Waste Water Treatment Plant (WWTP) in Brookings, Oregon (City).

The City agrees to accept septage from Roto Rooter on a temporary trial basis for three months, beginning June 1, 2019 and ending September 1, 2019. At the end of the three month period, the disposal process will be evaluated and a decision to enter into a long term agreement or to cease activities will be made.

The following limitations are designed to protect the integrity of the WWTP and the treatment process such that continued 100% compliance with the National Pollution Discharge Elimination System (NPDES) permit # 101773 is maintained.

1. The maximum volume of a single delivery shall be 3,000 gallons.
2. City (Jacobs) shall maintain a record of all sewage delivered to the WWTP.
3. No more than two deliveries will be accepted within any 24-hour period.
4. Limit deliveries to Monday, Wednesday, and Friday from 1000-1600. Schedule may be modified upon arrangement and agreement of both parties, with a minimum 24 hour notice.
5. Limit deliveries to six during any seven-day period.
6. Screen all sewage for debris before delivery to WWTP.
7. Test each load for pH before delivery.
8. Provide a certificate showing pH, gallons and proof of screening with each load.
9. The pH of septage received shall not be less than 6.0 nor higher than 9.0 at any time in accordance with NPDES Permit # 101773 Schedule A (3).

10. Discharge sewage at the bar-screens, inside the fenced compound.
11. Unload septage with a leak proof hose and a steady flow. Leaks, drips and spills shall be cleaned up immediately.
12. Septage unloading shall cease immediately upon detection (site, smell, pH) of petroleum products or any other chemicals.
13. Roto Rooter shall be responsible for sewage spills, clean up of spills and any resultant fines attributable to their operations.
14. Any and all regulatory costs of this agreement shall be the responsibility of Roto-Rooter.
15. Provide an Insurance Certificate of Liability naming the City of Brookings, WWTP, 905 Wharf Street, Brookings, OR 97415 as a certificate holder.
16. Maintain and provide proof of employee licensing and Workmans Compensation.
17. This agreement can be cancelled at any time by either party with or without cause.

For the duration of the trial period, the City shall assess a disposal fee of \$0.12 per gallon. Fees shall be invoiced monthly. A customary 30 day payment schedule will be in place.

If you have any questions or comments, please contact me at 541-469-1159.

Respectfully,



Anthony Baron  
Public Works and Development Services Director

**IN AGREEMENT WHEREOF**, this Agreement between the City and Roto Rooter is signed and executed this \_\_\_\_\_ day of \_\_\_\_\_, 2019.

\_\_\_\_\_  
Janell K Howard, City Manager

Date: \_\_\_\_\_

\_\_\_\_\_  
Luke Pyke, Site Manager, CTR – Roto Rooter

Date: \_\_\_\_\_

# Septage concerns and process plans

Septage- Waste material contained in or removed from a septic tank.

The largest concern when introducing raw septage to an activated sludge process is the danger of causing damage to the biological treatment process or decreasing the resiliency of the treatment system by overloading its capacity to treat.

The Brooking wastewater facility, while designed for substantial resiliency treats by maintaining a delicate balance of micro-organisms that digest or remove disease causing pathogens. The environment that we maintain for these aerobic organisms finds us acting more as zoo keepers, ensuring proper digestion, aeration, and disinfection rates while the organisms we cultivate do the bulk of the treatment process.

Domestic wastewater, with marginal industrial influence, has specific characteristics that can be anticipated. Process changes, or changes in the way the plant is operated, develop over a period of historical treatment. By analyzing typical wastewater characteristics and performing analysis we are best able to create a suitable environment to maximize treatment efficiency.

The largest concern, from an operations stand point, when receiving new industry or septage, are the biological or chemical characteristics of the wastewater being introduced. As the city has no control over the source of the wastewater, there are concerns that the introduction of them to the facility could potentially shock load the biological process, killing of the treatment ecosystem and leading to regulatory violations.

Specifically:

pH	a figure expressing the acidity or alkalinity of a solution on a logarithmic scale on which 7 is neutral, lower values are more acid and higher values more alkaline.
Volume	How much of the unknown septage is being introduced and at what rate
Total Suspended Solids (TSS)	Total suspended solids (TSS) is the dry-weight of suspended particles, that are not dissolved

It is also important to note that while the treatment method and environment we produce is aerobic (relating to, involving, or requiring free oxygen) it is reasonable to anticipate the septage we receive would be anaerobic (relating to, involving, or requiring an absence of free oxygen) Also important to note, septic tanks could potentially house untreatable items such as trash, plastics, wipes or other household goods.

## How does this affect treatment?

Analysis of septage pH is important in determining the acidity or alkalinity of the incoming flow. pH introduced below/above a specific threshold would kill the micro-organisms created in the treatment system that drive the treatment process. Specific concurrent analysis would have to prove compatible with existing biology in order to be considered non-toxic.

# Septage concerns and process plans

Volume and the speed in which it is introduced to the domestic wastewater stream would also need to be carefully controlled. If dilution is the solution to pollution, then any concentration of an unusual chemical or biological makeup could potentially disrupt or cause process problems if released too quickly. As such, frequency and volume would have to be carefully monitored and at least until treatment can be proven unaffected, limited and controlled.

Total suspended solids is a measure of the suspended solids waste in the wastewater. By knowing this characteristic, measured in mg/l, we can calculate total pounds of solids pushed through the facility.

$$TSS \text{ (mg/l)} \times \text{Flow (MGD)} \times 8.34 \text{ (lbs./gal of water)}$$

TSS mg/l or pounds is a control metric utilized to determine WAS/RAS and digestion rates. As such, knowing the physical makeup of water/waste of the domestic stream is important. Also, to note initial analysis should be conducted on BOD or biochemical oxygen demand. BOD is a measure of how much oxygen the organisms in the septage consume.

## **Other concerns:**

After chemical analysis and loading considerations have been considered, proper care has to be taken when introducing the septage to the wastewater plant. Introducing the septage prior to preliminary treatment (Bar screen and grit removal) would allow the domestic diluted mixture to receive all necessary treatment. Assurances have been given of pre-screening before delivery, but it would still not hurt to perform our own screening and grit removal. This of course assume that the only septage received will be strictly from residential septic tanks and nothing received from transient RV or chemical toilets.

Ideally shipping manifest would be provided for every load received signed by both delivering and receiving agency. This would allow transparent volume of delivery records for regulatory, administrative and public record.

Waste should be introduced through a non-pressurized gravity flow, reduced to at the least a 2-inch flow to control or limit the speed and allow thorough dilution with domestic wastewater stream. Pressurized discharge should be avoided as a catastrophic failure would result in a sanitary sewer overflow or spill. Any nearby storm drains should be protected with either an isolation device (sorberent sock) or a non-porous cover.

Septage delivery driver should be responsible for ensuring that any spill is contained by a catch basin when unhooking deliver hoses.

**Recommendation:** Initially, no more than 3000 gal. with at least a day in between shipments scheduled Monday, Wednesday and Friday. Septage should be sampled at the beginning, middle and end of introduction flow in order to collect a representative sample for analysis. At the very least, pH, TSS and TS analysis should conducted on all samples with additional analysis being performed as necessary.

Given the volume to be initially introduced, we do not anticipate any problems with the treatment process. Assuming an average flow of .87 MGD the recommended volume would only consist of 0.3% of daily average flow allowing the greatest opportunity to build a data set while minimally affecting treatment.

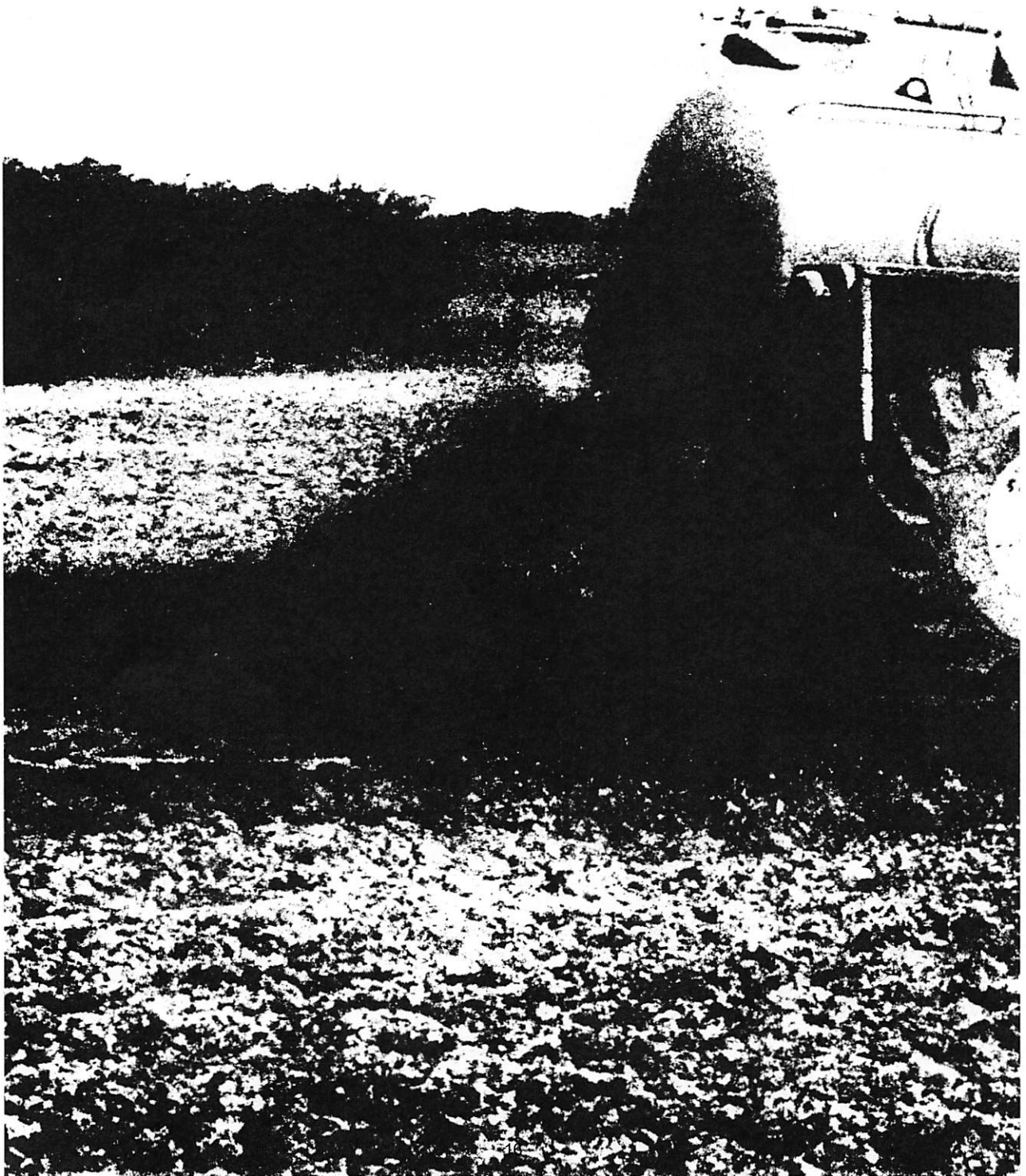
United States  
Environmental Protection  
Agency

Office of Research and  
Development  
Washington DC 20460

EPA/625/R-94/002  
September 1994



# Guide to Septage Treatment and Disposal





## Chapter 10

# Treatment at Wastewater Treatment Plants

A wastewater treatment plant (WWTP) is often a convenient and environmentally sound location for septage disposal. Many plants can be modified to receive and treat septage effectively. Septage addition, however, can have a significant impact on plant operations or performance if receiving facilities are not properly designed. Septage handling increases plant operation and maintenance (O&M) costs in proportion to the amount of septage received. The cost of residuals (sludge, grit, screenings) handling and disposal often shows the largest increase. The septage receiving program must be developed recognizing that the National Pollutant Discharge Elimination System (NPDES) permit of the treatment plant prohibits the acceptance of hazardous wastes under the Resource Conservation and Recovery Act (RCRA).

### 10.1 Estimating Plant Capacity

Determining the ability of a plant to handle septage and estimating the amount of material that can be effectively handled are complex processes. Table 10-1 lists the potential impacts of septage addition to a WWTP.

Figure 10-1 provides a method to estimate the allowable rates of septage addition, assuming that a holding tank is provided and that septage is added to the sewage flow on a semicontinuous basis. This chart takes into account the current loadings to the plant compared with its design loadings. Package plants or other activated sludge processes that do not employ primary treatment are the least amenable to septage handling. A conventional activated sludge plant (with primary clarifier) designed for 2 million gallons per day (mgd) and operating at 50 percent of design capacity should be capable of receiving a septage flow of 1.4 percent of 2 mgd, or 28,000 gal per day. A 2-mgd extended aeration plant operating at 50 percent capacity could receive 0.6 percent of 2 mgd, or 12,000 gal per day. Allowable septage volumes may be reduced due to septage characteristics, treatment plant operations, and sewage flow patterns. A factor of safety should be included in establishing allowable septage volumes.

Table 10-1. Impacts of Septage Addition to a WWTP

- Increased volume of screenings and grit requiring disposal
- Increased odor emissions from headworks
- Scum accumulation in clarifiers
- Increased organic loadings to biological processes
- Potential odor and foaming problems in aerated basins
- Increased loadings to sludge handling processes
- Increased sludge volumes requiring final disposal
- Increased housekeeping requirements

The adverse impacts of septage addition may increase significantly if septage is discharged directly from the hauler truck as a slug load into a small treatment plant. A 1,000-gal load of septage adds an organic load equivalent to 35,000 gal of sewage. If a 1-mgd plant with no primary clarifier received a 1,000 gal load of septage over a 10-min period, the instantaneous organic loading would increase by a factor of four. If that load were to be added over a period of 60 min, the organic loading would increase by only about 60 percent. As a rule of thumb, for unequalized septage addition to a sewage treatment process, the allowable septage addition rates determined using Figure 10-1 should be divided by five.

If septage is added to the solids handling train, allowable loadings must be estimated based on site-specific information and will vary depending on both the existing solids handling processes used at the plant and their design capacity. First, information on current versus design hydraulic and solids loadings must be compiled for those processes that will be employed to cotreat septage-sludge mixtures. Such processes may include thickening, aerobic or anaerobic digestion, dewatering, chemical stabilization, and composting. Then, conservative estimates of the volumes of septage that could be processed without exceeding the design capacity of each unit process can be developed.

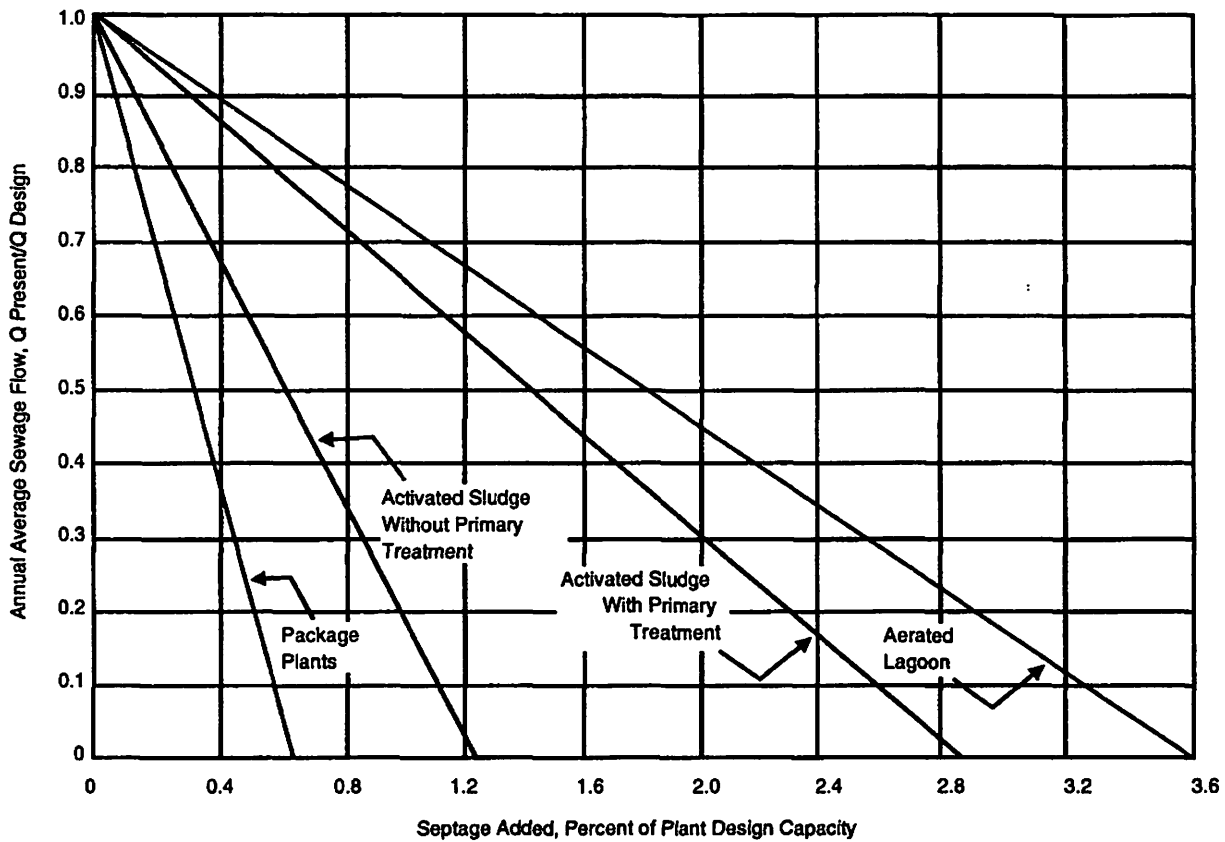


Figure 10-1. Allowable septage loadings to a sewage treatment plant having a septage holding tank (1).

## 10.2 Additional O&M Requirements

Septage addition to a WWTP will increase O&M requirements, as well as the administrative tasks associated with recordkeeping and billing of haulers, in proportion to the quantity of septage treated. Section 8.1 describes the typical O&M requirements of a septage receiving/holding facility.

Table 10-2 is a checklist of additional O&M requirements for a plant receiving septage. Many of these tasks are a normal part of treatment plant operation and maintenance. The frequency of cleaning and inspection, however, is likely to increase. For example, screenings, grit, scum, and sludge might need more frequent removal from the

site, and accumulations from water surfaces and tank walls might also need more frequent removal.

Monitoring requirements at a WWTP are unlikely to increase significantly with septage addition. A well-operated plant already employs a data collection program sufficient to maintain good performance and to demonstrate compliance with discharge permits. During peak septage loadings, aeration basin dissolved oxygen (DO) concentrations should be checked frequently to ensure that adequate levels (usually  $\geq 2.0$  mg/L) are present. Other operational data should continue to be collected to assess the impact of septage on overall plant operation and performance. Such data should include sludge production, chemical and power consumption, cake solids from sludge dewatering, and grit and screenings volumes.

Table 10-2. O&M Checklist for Handling Septage at a WWTP

Task	Recommended Frequency
<b>Preliminary Treatment</b>	
<input type="checkbox"/> Inspect screens for plugging	Twice per shift
<input type="checkbox"/> Backflush grit transfer lines	After each pumping cycle
<input type="checkbox"/> Remove grit and screenings from plant	As necessary
<input type="checkbox"/> Flush grease from tank walls, channels	Daily
<b>Primary Clarification</b>	
<input type="checkbox"/> Remove any grease and scum from surface	As necessary
<input type="checkbox"/> Hose down weirs	As necessary
<b>Aeration Basins</b>	
<input type="checkbox"/> Check dissolved oxygen; maintain minimum of 2 mg/L at peak septage flows	Twice per shift
<input type="checkbox"/> Hose down any excess foam accumulation	Once per shift
<b>Final Clarifiers</b>	
<input type="checkbox"/> Inspect for scum accumulation	Twice per shift
<b>Sudge Handling</b>	
<input type="checkbox"/> Remove grease and scum from gravity thickeners	Daily
<input type="checkbox"/> Hose down thickener weirs	Daily
<input type="checkbox"/> Check for increases in biological and/or chemical conditioning requirements	Daily
<input type="checkbox"/> Check impact on cake solids content	Daily



# Decentralized Systems Technology Fact Sheet Septage Treatment/Disposal

## DESCRIPTION

In 1990 the U.S. Department of Commerce, Census Bureau, estimated that the number of housing units with septic tanks or cesspools in the U.S. was 24.6 million and approximately 5.5 billion gallons of septage were being generated each year. "Septage" is the liquid and solid material pumped from a septic tank, cesspool, or other primary treatment source. Scum accumulates on the surface while the sludge settles at the bottom, comprising 20 to 50% of the total septic tank volume when pumped. A septic tank will usually retain 60 to 70% of the solids, oil, and grease that passes through the system.

Septage is classified according to the environment in which it is generated. This fact sheet will focus solely on domestic septage. Treatment and disposal of domestic septage is governed by the U.S. Code of Federal Regulations (40 CFR) Part 503. Municipalities can also establish local regulations for septage handling, treatment, and disposal in addition to the federal and state regulations.

There are several approaches to septage treatment and disposal which include private or public ownership. Larger municipalities are capable of managing the whole process from handling and treatment to disposal, while other municipalities opt to use privately owned facilities that alleviate some of the responsibilities of operating a facility. Land disposal of septage after adequate treatment is also a popular option.

## Septage characteristics

Factors that affect the physical characteristics of septage are: climate, user habits, septic tank size, design, and pumping frequency, water supply characteristics, piping material, and the use of water-conservation fixtures, garbage disposals, household chemicals, and water softeners. Table 1 lists the characteristics and limits of domestic septage.

**TABLE 1 CHARACTERISTICS OF  
SEPTAGE CONVENTIONAL  
PARAMETERS**

Parameter	Concentration	
	Minimum	Maximum
Total solids	1,132	130,475
Total volatile solids	353	71,402
Total suspended solids	310	93,378
Volatile suspended	95	51,500
Biochemical oxygen demand	440	78,600
Chemical oxygen demand	1,500	703,000
Total Kjeldahl nitrogen	66	1,060
Ammonia nitrogen	3	116
Total phosphorus	20	760
Alkalinity	522	4,190
Grease	208	23,368
pH	1.5	12.6
Total coliform	10 <sup>7</sup> /100 mL	10 <sup>9</sup> /100 mL
Fecal coliform	10 <sup>6</sup> /100 mL	10 <sup>8</sup> /100 mL

Note: The measurements above are in mg/L unless otherwise indicated.

Source: U.S. EPA, 1994.

**TABLE 2 SOURCES OF SEPTAGE**

Description Rate	Removal Pump-out	Characteristics
Septic tank	2-6 years, but can vary with location local ordinances	Concentrated BOD, solids, nutrients, variable toxics (such as metals), inorganics (sand), odor, pathogens, oil, and grease
Cesspool	2-10 years	Concentrated BOD, solids, nutrients, variable toxics, inorganics, sometimes high grit, odor, pathogens, oil, and grease
Privies/portable toilets	1 week to months	Variable BOD, solids, inorganics, odor, pathogens, and some chemicals
Aerobic tanks	Months to 1 year	Variable BOD, inorganics, odor, pathogens, and concentrated solids
Holding tanks (septic tank with no drain-field, typically a local requirement)	Days to weeks	Variable BOD, solids, inorganics, odor, and pathogens, similar to raw wastewater solids
Dry pits (associated with septic fields)	2-6 years	Variable BOD, solids, inorganics, and odor
Miscellaneous May Exhibit Characteristics of Septage		
Private wastewater treatment plants	Variable	Septic tank
Boat pump-out station	Variable	Portable toilets
Grit traps	Variable	Oil, grease, solids, inorganics, odor, and variable BOD
Grease traps	Weeks to months	Oil, grease, BOD, viscous solids, and odor

Source: Septage Handling Task Force (1997), copyright Water Environment Federation, used with permission.

**APPLICABILITY**

Septage is highly variable and organic, with significant levels of grease, grit, hair, and debris. The liquids and solids pumped from a septic tank or cesspool have an offensive odor and appearance, a tendency to foam upon agitation, and a resistance to settling and dewatering. Septage is also a host for many disease-causing viruses, bacteria, and parasites. As a result, septage requires special handling and treatment. However, the polymers and chemical conditioners available today have considerably reduced these requirements.

The handling and disposal of septage are based on the characteristics and volume of septic waste. Knowledge of this information is also useful for design purposes and determining typical design values for treatment and disposal. Table 2 summarizes the sources of septage.

**ADVANTAGES AND DISADVANTAGES**

**Advantages**

The advantage of using treatment plants is that they provide regional solutions to septage management.

**Disadvantages**

- May need a holding facility during periods of frozen or saturated soil.
- Need a relatively large, remote land area for the setup of the septic system.
- Capital and operation and maintenance costs tend to be high.
- Skilled operators may be required.
- Some limitations to certain management options of untreated septage include lack of available sites and potential odor and pathogen problems. These problems can be reduced by pretreating and stabilizing the septage before it is applied to the land.
- Septage treated at a wastewater treatment facility has the potential to upset processes if the septage addition is not properly

controlled, and increased requirements for handling and disposing of residuals.

## DESIGN CRITERIA

### Surface application

Septage can be applied to the land as a fertilizer and soil conditioner. Application rates depend on the slope, soil type, depth of application, drainage class, and hydraulic loading. Septage must not be applied before or during rainfall or on frozen ground. Thus, an interim storage facility is needed. Some states require septage to be disinfected before application.

- Spray Irrigation-pretreated (e.g., screened) septage is pumped at 80 to 100 psi through nozzles and sprayed directly onto the land. Spray irrigation can be used on steep or rough land and minimizes disturbances to the soil by trucks. It is important to consider the wind patterns and the site location when using spray irrigation because of the offensive odors associated with septage.
- Ridge and Furrow Irrigation-this is used for relatively level land, with slopes no greater than 0.5 to 1.5%. In this disposal method, pretreated septage is applied directly to furrows or to row crops that will not be directly consumed by humans.
- Hauler Truck Spreading-septage is applied to the soil directly from a hauler truck that uses a splash plate to improve distribution. The same truck that pumps out the septic tank can be used for transporting and disposing the septage.
- Farm Tractor and Wagon Spreading-liquid septage or septage solids are transferred to farm equipment for spreading. This allows for application of liquid or solid septage. However, if the septage was not lime stabilized, then the septage must be incorporated into the soil within 6 hours.

### Subsurface Incorporation

Subsurface incorporation places untreated septage just below the soil surface, reducing odors and health risks while fertilizing and conditioning the soil. Septage can only be applied to slopes less than 8%, and the soil depth to seasonal high water table must be at least 20 inches (or as mandated by local regulations). A holding facility is required during periods of wet or frozen ground. To prevent soil compaction and allow sufficient infiltration, equipment must not be driven over the site until 1 to 2 weeks after application.

- Plow and Furrow Cover-typically, a moldboard plow is used with furrow wheels and coulters. The coulter blade slits the ground ahead of a plow. Liquid septage is discharged from a tank into a narrow furrow about 15 to 20 cm deep and is then covered by a second plow.
- Subsurface Injection-liquid septage is injected in a narrow cavity created by a tillage tool. The opening is about 10 to 15 cm below the surface. Some equipment uses a forced closure of the injection swath.

### Burial

Septage burial includes disposal in holding lagoons, trenches, and sanitary landfills. There is a high odor potential during septage application until a final cover is placed on top. It is essential to select an appropriate site for disposal not only to control odors, but to avoid groundwater pollution.

- Holding Lagoons- these disposal lagoons are a maximum of 6 feet deep, with septage placed in small incremental lifts of 15 to 30 cm and no infiltration. Multiple lagoons are loaded in sequential order for optimum drying. To decrease odors, the lagoon inlet pipe can be placed below liquid level.
- Trenches-multiple trenches are filled sequentially with septage in small lifts of 15 to 20 cm for optimum drying. Each trench is then covered with soil (2 feet), and new trenches are opened. Another option is to

leave a filled trench uncovered to enable some solids to settle and liquids to evaporate and leach out. The solids, along with some bottom and sidewall material, are removed and the trench can be reused.

- Sanitary Landfills- the primary problems that need to be considered when septage is added to a sanitary landfill are the production of leachate, treatment, and odor. Therefore, septage must not be disposed of in landfills with areas that have over 90 cm of rainfall, landfills that do not have leachate prevention and control facilities, or those not having isolated underlying rock. Each area that is filled with septage should be covered with 15 cm of soil each day and 2 feet of final cover within 1 week after the placement of the final lift. In general, sanitary landfills are not cost-effective disposal options for septage.

Septage is resistant to dewatering and as a result conditioning chemicals are used. The amount of chemical used is based on the load and its characteristics. A combination of lime and ferric chloride has been successfully used, along with certain polymers. Septage treatment plants also use other processes to dewater conditioned septage such as screw presses, plate and frame presses, belt presses, rotary vacuum filters, gravity and vacuum-assisted drying beds, and sand drying beds.

Another feasible option for septage treatment facilities is composting in locations where bulking agents are available and the humus product is needed as a soil conditioner. If the necessary bulking agents are not accessible, this method can be expensive. For this reason, it is preferable to dewater septage before composting.

## **OPERATION AND MAINTENANCE**

The three basic alternatives for septage treatment and disposal are land application, treatment at wastewater treatment plants, and treatment at independent septage treatment plants.

### **Treatment at independent septage treatment plants**

- Stabilization lagoon.
- Chlorine oxidation.
- Aerobic digestion.
- Anaerobic digestion.
- Biological and chemical treatment.
- Conditioning and stabilization.
- Composting

### **Treatment at wastewater treatment plants**

- Addition to upstream sewer manhole.
- Addition to plant headworks.
- Addition to sludge handling process.
- Addition to both liquid stream and sludge handling processes.

### **Land application**

- Surface application.
- Subsurface incorporation.
- Burial.

Selecting the appropriate septage management option depends on technical issues and regulatory requirements. Some of the factors that influence the process of selection include: land availability and site conditions, buffer zone requirements, hauling distance, fuel costs, labor costs, costs of disposal, and other legal and regulatory requirements.

### **Treatment at Independent Septage Treatment Plants**

Independent septage treatment plants use such processes as chlorine oxidation, aerobic digestion, anaerobic digestion, and biological and chemical

treatment. Many septage treatment plants also use lime to provide both conditioning and stabilization before the septage is dewatered. The liquid residual can be discharged to a privately owned treatment facility or undergo further treatment and then be discharged. Septage solids are then sent to either a landfill, composted, applied to the land, or incinerated.

When suitable land is unavailable and wastewater treatment facilities are too distant or do not have adequate capacity, independent septage treatment plants can be of use. Such treatment plants have been designed exclusively for treating septage and have many unit processes to handle both the liquid and solid portions of septage.

Stabilization is a treatment method that decreases odors, the levels of disease-causing organisms, and the potential for putrefaction of septage. Pretreatment/stabilization is achieved by physical, chemical, or biological processes. Some methods of stabilizing septage are discussed below.

#### *Alkali (Lime) Stabilization*

Lime or other alkaline material is added to liquid septage to raise the pH to 12.0 for a minimum of 30 minutes. Although there is a lot of variation in septage characteristics and lime requirements, mixing is not very difficult, and approximately 20 to 25 pounds of lime are used for every 1,000 gallons of septage. The three main stabilization approaches before land application are to add lime slurry: 1) to the pumper truck before the septage is pumped, 2) to the pumper truck while the septage is being pumped, or 3) to a tank that is storing septage that was discharged from a pumper truck. The septage and lime may sometimes be mixed by a coarse bubble diffuser system located in the tank or truck. In some states, it is prohibited to use hauler trucks for the stabilization process. A separate storage tank is necessary for lime and septage mixing. This is beneficial because a separate holding tank allows for more uniform mixing and easier sampling, monitoring, and control.

#### *Aerobic Digestion*

Septage is aerated for 15 to 20 days in an open tank to achieve biological reduction in organic solids and odor potential. The time requirements increase with lower temperatures. Normally, this is not a cost-effective option.

#### *Anaerobic Digestion*

Septage is retained for 15 to 30 days in an enclosed vessel to achieve biological reduction of organic solids. Anaerobic digestion is generally not used except for co-treatment with sewage sludge. However, one advantage is that anaerobic digestion generates methane gas, which can be used for digester heating or other purposes.

#### *Composting*

Liquid septage or septage solids are mixed with a bulking agent (e.g., wood chips, sawdust) and aerated mechanically or by turning. Biological activity generates temperatures that are sufficiently high to destroy pathogens. The composting process converts septage into a stable, humus material that can be used as a soil amendment. This process tends to create odors that can be a problem if not handled properly.

After the septage is stabilized, it is then sent for further treatment or disposal, which is described in the sections that follow.

#### **Land application**

Land application of septage is currently the most commonly used disposal method in the U.S. It is relatively simple and cost-effective, uses low energy, and recycles organic material and nutrients to the land.

With proper management, domestic septage is a resource containing nutrients that can condition the soil and decrease the reliance on chemical fertilizers for agriculture. Septage management maximizes these benefits of septage while protecting public health and the environment.



Land application includes spreading septage from septage hauler trucks, specially designed land application vehicles, or tank wagons onto sites using spray irrigation, ridge and furrow irrigation, and overland flow.

### **Treatment at Wastewater Treatment Plants**

A convenient and attractive option for septage treatment is performing the treatment at a wastewater treatment facility. The constituents of septage are similar to domestic sewage, even though septage is stronger and more concentrated. The advantages of treating septage at wastewater treatment plants are that many plants are capable of handling some septage and that it centralizes waste treatment operations. The **four main approaches to treating septage at a wastewater treatment plant** are:

#### *To Upstream Sewer Manhole*

When septage is added to a sewer upstream of the wastewater treatment plant, substantial dilution of septage occurs prior to it reaching the wastewater treatment plant. This method is only feasible with large sewers and treatment plants. It is economical due to the very simple receiving station design. However, there is the potential for grit and debris to accumulate in the sewer and for odor problems near the manhole.

#### *To Plant Headworks*

Septage can be added to sewage immediately upstream of the screening and grit removal processes. This method, like the one mentioned above, is economical because of the very simple receiving station design. It also allows the wastewater treatment plant staff to have control of the septage discharge.

#### *To Sludge Handling Process*

Septage can also be handled as sludge and processed with wastewater treatment plant sludge after pretreatment in the receiving station. This method reduces the loading to liquid stream processes, and it eliminates the potential for affecting effluent quality. However, there could be an adverse effect on the sludge treatment processes,

such as dewatering. Adding septage to the sludge handling process **may** also **cause clogging of the pipes** and increase wear on the pumps if the septage is not screened and degrittied in the receiving station.

#### *To Both Liquid Stream and Sludge Handling Processes*

Septage can also be pretreated to separate liquid and solid fractions, which are then processed accordingly. This provides more concentrated sludge for processing and reduces the organic loading to liquid stream processes and the hydraulic loading to sludge processes. Increased operations are required for septage pretreatment at the receiving station.

### **COST**

Cost considerations cannot be generalized because of the wide range of options available for septage management. The cost of a septage management system is dependent on the treatment and disposal method used and the regulatory requirements of a particular area.

Administrators of a septage management program should be aware of disposal options and the cost involved. The median cost of disposal (or tipping fee) typically ranges from 3 to 6 cents per gallon.

### **REFERENCES**

1. Brown, D. V. and R. K. White. December 1977. "Septage Disposal Alternatives in Rural Areas." Ohio Agricultural Research and Development Center. Research Bulletin 1096. Cooperative Extension Service. The Ohio State University Extension Bulletin 624.
2. Septage Handling Task Force. 1997. Septage Handling. Water Environment Federation (WEF) Manual of Practice No. 24. WEF. Alexandria, Virginia.

3. Ungvarsky, J. and K. Mancl. 1982. "Septage Use and Disposal." Special Circular 317. The Pennsylvania State University. College of Agriculture, Extension Service.
4. U.S. EPA, 1984. *Handbook: Septage Treatment and Disposal*. EPA Municipal Environmental Research Laboratory. Cincinnati, Ohio. EPA-625/6-84-009.
5. U.S. EPA, 1994. *Guide to Septage Treatment and Disposal*. EPA Office of Research and Development. Washington, D.C. EPA/625/R-94/002.

### **ADDITIONAL INFORMATION**

Lisa Dvello  
Director at Large  
Town of Flower Mound  
2121 Cross Timbers Road  
Lewisville, TX 75028

Daniel Balboa  
Director at Large  
Balboa Septic Design  
3470 Jack C. Hays Trail  
Buda, TX 78610

The mention of trade names or commercial products does not constitute endorsement or recommendation for use by the U.S. Environmental Protection Agency.

For more information contact:

Municipal Technology Branch  
U.S. EPA  
Mail Code 4204  
401 M St., S.W.  
Washington, D.C., 20460





### **Description**

Septage, which is classified according to the environment where it is generated, refers to both the solid and liquid material pumped from septic tanks, cesspools and other primary treatment sources.

Septage management and disposal has several approaches, both for public and private ownership. Some areas can manage the entire process ranging from handling and collection and treatment to disposal, while others prefer the use of privately-owned facilities to ease off on the responsibility of operating an entire facility. After adequate treatment, land disposal of septage is still a popular option.

### **Applicability**

Handling and disposal of septage are based on the characteristics and volume of septic waste. These would also serve as basis for the design of the facility, including the design parameters for treatment and disposal, considering that septage is highly variable and organic.

### **Performance**

There are three basic alternatives for septage treatment and disposal. These include land application, treatment at wastewater treatment plants, and treatment at independent septage treatment plants.<sup>1</sup> These options are, however, dependent on various technical and regulatory requirements. Factors influencing selection include land availability, site conditions, buffer zone requirements, hauling distance, fuel costs, labor costs, costs of disposal, and other legal and regulatory requirements.

#### **Notes:**

<sup>1</sup> Land application is the most commonly used disposal method because of its simplicity, cost-effectiveness, low energy requirements as well as it provides a way to recycle organic material and nutrients to the land. Treatment at the wastewater treatment facilities provides a convenient and attractive option for managing septage as it centralizes operations (i.e., treatment of both septage and sewage). Utilizing septage treatment plants, on the other hand, involves processes such as chlorine oxidation, aerobic digestion, anaerobic digestion as well as biological and chemical treatment. Some treatment plants also use lime both as a conditioning and stabilizing agent before septage is dewatered. Septage solids is either composted, applied to land, incinerated or sent to a landfill while liquid discharge can be further treated prior to discharge.

### **Cost**

The cost of a septage management program can vary greatly due to the variety of options available. Usually, the cost is dependent on the treatment and disposal method to employ and the regulatory requirements of a particular area.

Disposal costs for septage (i.e., tipping fee) is typically estimated to be about \$0.04–\$0.08 per gallon.

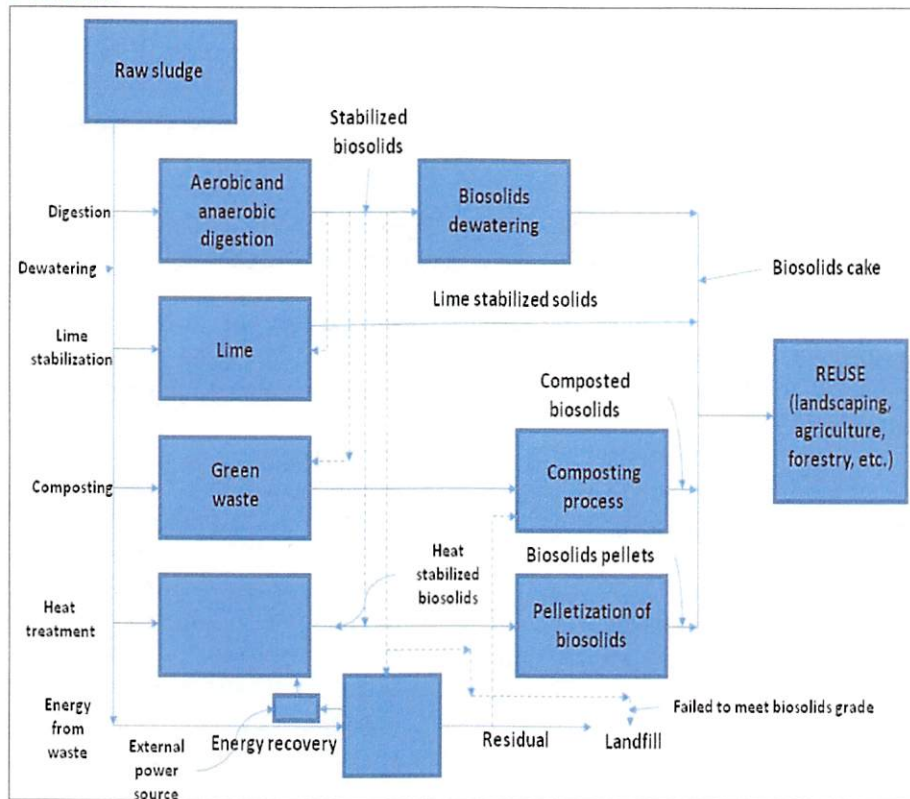
### **Advantages**

- The use of treatment plants offers regional solutions to septage management.

### **Disadvantages**

- A holding facility may be required during periods of frozen or saturated soil.
- The setup of the septic system may require a relatively large, remote land area.
- Capital and operation and maintenance costs are on the high side.
- Skilled operators may be required.
- The lack of available sites and potential odor and pathogen problems present limitations to certain management options of untreated septage.
- Septage treated in a wastewater treatment facility may disrupt processes particularly when septage addition is not properly controlled, and increased requirements for handling and disposing of residuals.

## Process



Source: H<sub>2</sub>Oz. 2009.

Robert Domingo

### Notes:

Costs are updated to 2013 prices using GDP deflator.  
In this document, "\$" refers to US Dollars.

### References:

H<sub>2</sub>Oz. 2009. *Biosolids*. <http://bit.ly/1fDGP7W>.

United States Environmental Protection Agency (USEPA). 1999. *Septage Treatment/Disposal*. Decentralized Systems Technology Fact Sheet. <http://1.usa.gov/1hmPkke>.

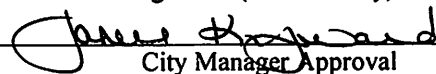
# CITY OF BROOKINGS

## COUNCIL AGENDA REPORT

Meeting Date: May 13, 2019

Originating Dept: City Manager

\_\_\_\_\_  
Signature (submitted by)

  
\_\_\_\_\_  
City Manager Approval

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Subject:

Letter of Support for Advanced Health

Recommended Motion:

Motion to authorize the Mayor to sign a letter of support to the Oregon Health Authority for Advanced Health application for CCO 2.0.

Background/Discussion:

Oregon first established coordinated care organizations (CCO) in 2012 to transform health care delivery in the state. CCOs bring together physical, behavioral, and oral health providers to coordinate care for people on the Oregon Health Plan. They improve health and reduce costs by providing more coordinated, flexible and innovative services. CCOs are rewarded for achieving specific health outcomes and quality measures. Nearly 87 percent of Oregon's 1 million OHP members are enrolled in CCOs.

Advanced Health has applied for the 2020-2024 coordinated care organization (CCO) contract with the Oregon Health Authority (OHA) for Coos and Curry Counties. As part of the application, Advanced Health is required to identify key stakeholders (individuals) involved in their community engagement work and submit to OHA community letters of support from these key stakeholders to demonstrate that they are engaged with community partners.

Attachment(s):

- a. Draft letter



# City of Brookings

898 Elk Drive, Brookings, OR 97415  
(541) 469-1104 Fax (541) 469-3650 TTY (800) 735-1232  
[jpieper@brookings.or.us](mailto:jpieper@brookings.or.us); [www.brookings.or.us](http://www.brookings.or.us)

## **JAKE PIEPER**

*Mayor*

May 13, 2019

To Whom It May Concern,

I have been pleased to learn that a collaborative Community Health Assessment (CHA) was completed for Curry County in 2018, and that now a collaborative Community Health Improvement Plan (CHIP) is being developed for Curry County, which is establishing a clear road map for improving the health of individuals and our entire community. I understand that Advanced Health has taken the lead in the development of the CHA and the CHIP.

I have also recently learned that Advanced Health has spearheaded the Adverse Childhood Experiences (ACEs) and Resiliency work in both Coos and Curry Counties through their newly formed South Coast Together collaborative. Between Coos and Curry Counties, over 1,200 community members have been trained on the ACEs research-regarding the prevalence and consequences of adverse childhood experiences, and what to do to prevent them and how to help foster resiliency.

Advanced Health also hosts a monthly Community Advisory Council (CAC) meeting in Curry County, which gives our local community members on the Oregon Health Plan a voice in their healthcare. I now understand that the role of our local CAC is to make sure that the health care needs of the people in our community are being addressed.

On behalf of the City of Brookings, we are grateful for how Advanced Health is attempting to meet the needs not only of our most vulnerable community members, but of the community at large. We fully support Advanced Health's application submission for CCO 2.0 and we look forward to their continued presence in Curry County.

Sincerely,

Jake Pieper  
Mayor

CC: City Council

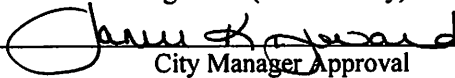
# CITY OF BROOKINGS

## COUNCIL AGENDA REPORT

Meeting Date: May 13, 2019

Originating Dept: City Manager

Signature (submitted by)

  
City Manager Approval

---

Subject:

Annual Yard of the Month Program

Motion:

Approve the reinstatement of the annual Yard of the Month program for five months beginning May, 2019.

Financial Impact:

Through utility rebates and business license credits, this program costs the City approximately 15 hours of staff time and \$500, annually.

Background/Discussion:

This will be the City's 17<sup>th</sup> year for recognizing residents and business owners for their beautification efforts through its annual Yard of Month Program.

The program includes the presentation of awards, May through September, in two categories: Best Residential Property and Best Commercial Property. Monthly winners receive a certificate, and a \$50 rebate toward their City utility bill or business license renewal. Winners are also recognized with signage, local media coverage and mention at a City Council meeting.

Report Criteria:  
Report type: Summary

GL Period	Check Issue Date	Check Number	Vendor Number	Payee	Check GL Account	Amount
04/19	04/02/2019	82863	5783	ONCAIC	10-00-2005	175.00
04/19	04/04/2019	82864	5908	Amazon Capital Services	49-00-2005	685.89
04/19	04/04/2019	82865	5871	BALCO Uniform Co Inc	10-00-2005	831.23
04/19	04/04/2019	82866	4767	Brookings Harbor Chamber of Commerc	32-00-2005	3,950.00
04/19	04/04/2019	82867	313	Brookings Vol Firefighters	10-00-2005	2,250.00
04/19	04/04/2019	82868	715	Budge McHugh Supply	20-00-2005	4,669.97
04/19	04/04/2019	82869	5567	CAL/OR Insurance Specialists Inc	30-00-2005	683.33
04/19	04/04/2019	82870	5070	Canon Solutions America	10-00-2005	2.32
04/19	04/04/2019	82871	5822	Chaves Consulting Inc	49-00-2005	370.20
04/19	04/04/2019	82872	3834	Clean Sweep Janitorial Service	10-00-2005	2,200.00
04/19	04/04/2019	82873	5827	Coastal Investments LLC	10-00-2005	1,130.00
04/19	04/04/2019	82874	1745	Coastal Paper & Supply, Inc	10-00-2005	195.36
04/19	04/04/2019	82875	173	Curry Equipment	10-00-2005	153.50
04/19	04/04/2019	82876	166	Dan's Auto & Marine Electric	10-00-2005	55.36
04/19	04/04/2019	82877	284	Day Management Corp	10-00-2005	195.00
04/19	04/04/2019	82878	317	DCBS - Fiscal Services	10-00-2005	153.33
04/19	04/04/2019	82879	2067	Enviro-Clean Equipment	25-00-2005	77.65
04/19	04/04/2019	82880	3342	Fastenal	20-00-2005	315.54
04/19	04/04/2019	82881	2186	Ferguson Waterworks #3011	20-00-2005	330.72
04/19	04/04/2019	82882	5432	First Community Credit Union	25-00-2005	812.99
04/19	04/04/2019	82883	4646	Frontier	30-00-2005	196.25
04/19	04/04/2019	82884	5004	Galls, LLC	10-00-2005	321.45
04/19	04/04/2019	82885	5065	Gold Beach Lumber	50-00-2005	434.14
04/19	04/04/2019	82886	199	Richard Harper	10-00-2005	400.00
04/19	04/04/2019	82887	162	Kerr Hardware	50-00-2005	2,473.00
04/19	04/04/2019	82888	202	League of Oregon Cities	10-00-2005	150.00
04/19	04/04/2019	82889	2834	Kelby McCrae	10-00-2005	94.00
04/19	04/04/2019	82890	4487	Net Assets Corporation	10-00-2005	228.00
04/19	04/04/2019	82891	5886	Office Depot Inc	10-00-2005	67.12
04/19	04/04/2019	82892	4781	OHA Drinking Water Services	20-00-2005	450.00
04/19	04/04/2019	82893	3561	Oil Can Henry's	10-00-2005	46.48
04/19	04/04/2019	82894	5008	Online Information Services	10-00-2005	134.48
04/19	04/04/2019	82895	4	Kristen Campbell	10-00-2005	218.00
04/19	04/04/2019	82896	4	Megan Ritter	10-00-2005	218.00
04/19	04/04/2019	82897	5101	Pitney Bowes Reserve Acct	10-00-2005	500.00
04/19	04/04/2019	82898	1173	Positive Promotions Inc	10-00-2005	141.60
04/19	04/04/2019	82899	322	Postmaster	25-00-2005	850.00
04/19	04/04/2019	82900	5870	Rita Ritz	32-00-2005	136.00
04/19	04/04/2019	82901	1840	Rogue Credit Union	15-00-2005	1,709.47
04/19	04/04/2019	82902	5481	Sourwood Running LLC	32-00-2005	2,000.00
04/19	04/04/2019	82903	5513	South Coast Development Council Inc	50-00-2005	20,000.00
04/19	04/04/2019	82904	5413	Southern Computer Warehouse	49-00-2005	2,869.88
04/19	04/04/2019	82905	380	Stadelman Electric Inc	50-00-2005	10,272.74
04/19	04/04/2019	82906	4542	Umpqua Bank	10-00-2005	8,484.19
04/19	04/04/2019	82907	2863	Verizon Wireless	10-00-2005	497.79
04/19	04/04/2019	82908	5920	Worthington Direct Inc	10-00-2005	841.83
04/19	04/08/2019	82909	5921	Turf Equipment Source	50-00-2005	14,900.00
04/19	04/11/2019	82910	5908	Amazon Capital Services	49-00-2005	518.21
04/19	04/11/2019	82911	5453	Best Western Agate Beach Inn	10-00-2005	397.35
04/19	04/11/2019	82912	4939	BI- Mart Corporation	25-00-2005	15.61
04/19	04/11/2019	82913	5070	Canon Solutions America	10-00-2005	133.59
04/19	04/11/2019	82914	149	Carpenter Tire Factory	10-00-2005	85.00
04/19	04/11/2019	82915	3015	Charter Communications	30-00-2005	495.00

M = Manual Check, V = Void Check



GL Period	Check Issue Date	Check Number	Vendor Number	Payee	Check GL Account	Amount
04/19	04/11/2019	82916	5922	Tobias Chittock	10-00-2005	39.00
04/19	04/11/2019	82917	1740	Code Publishing Company Inc	10-00-2005	480.00
04/19	04/11/2019	82918	183	Colvin Oil Company	10-00-2005	2,209.06
04/19	04/11/2019	82919	185	Del Cur Supply	25-00-2005	64.99
04/19	04/11/2019	82920	2640	Dyer Partnership Inc., The	51-00-2005	9,749.58
04/19	04/11/2019	82921	2640	Dyer Partnership Inc., The	55-00-2005	10,738.52
04/19	04/11/2019	82922	5073	Edwards Roofing	50-00-2005	1,133.00
04/19	04/11/2019	82923	2186	Ferguson Waterworks #3011	20-00-2005	906.27
04/19	04/11/2019	82924	153	Ferrellgas	25-00-2005	457.73
04/19	04/11/2019	82925	4646	Frontier	10-00-2005	140.85
04/19	04/11/2019	82926	4872	G. W., Inc.	10-00-2005	423.03
04/19	04/11/2019	82927	1346	Gail's Graphics	61-00-2005	292.00
04/19	04/11/2019	82928	5452	Pamela Ganey	10-00-2005	97.00
04/19	04/11/2019	82929	4980	iSecure	10-00-2005	74.00
04/19	04/11/2019	82930	5888	Lehr	10-00-2005	40,531.38
04/19	04/11/2019	82931	5255	Gavin McVay	10-00-2005	210.00
04/19	04/11/2019	82932	4443	Napa Auto Parts-Golder's	10-00-2005	14.70
04/19	04/11/2019	82933	3159	NorthCoast Health Screening	10-00-2005	45.00
04/19	04/11/2019	82934	5886	Office Depot Inc	10-00-2005	174.63
04/19	04/11/2019	82935	279	One Call Concepts, Inc	20-00-2005	88.44
04/19	04/11/2019	82936	4479	Oregon Society of CPA's	10-00-2005	315.00
04/19	04/11/2019	82937	252	Paramount Pest Control	10-00-2005	55.00
04/19	04/11/2019	82938	4	Mike Warriner	10-00-2005	218.00
04/19	04/11/2019	82939	866	Pitney Bowes Global Financial , LLC	10-00-2005	144.93
04/19	04/11/2019	82940	5768	Proficient Auto Center Inc	25-00-2005	68.00
04/19	04/11/2019	82941	3	James Shopshire	20-00-2005	90.31
04/19	04/11/2019	82942	5923	Mavis Reynolds	10-00-2005	30.00
04/19	04/11/2019	82943	5870	Rita Ritz	10-00-2005	65.00
04/19	04/11/2019	82944	582	South Coast Office Supply	25-00-2005	110.95
04/19	04/11/2019	82945	861	Village Express Mail Center	10-00-2005	79.24
04/19	04/11/2019	82946	2122	Cardmember Service	10-00-2005	7,561.12
04/19	04/11/2019	82947	169	Waste Connections Inc	25-00-2005	1,115.65
04/19	04/11/2019	82948	151	Western Communications, Inc.	10-00-2005	99.00
04/19	04/18/2019	82949	4734	Aramark Uniform Services	10-00-2005	120.00
04/19	04/18/2019	82950	3034	BAVCO Apparatus & Valve Co	20-00-2005	247.00
04/19	04/18/2019	82951	4363	Black Rice & Luna LLP	10-00-2005	2,114.00
04/19	04/18/2019	82952	5108	Brad Kelly, PT	25-00-2005	180.00
04/19	04/18/2019	82953	5070	Canon Solutions America	10-00-2005	276.00
04/19	04/18/2019	82954	5858	CH2M Hill OMI	25-00-2005	107,604.13
04/19	04/18/2019	82955	3015	Charter Communications	10-00-2005	229.96
04/19	04/18/2019	82956	4746	Curry County Treasurer	10-00-2005	289.00
04/19	04/18/2019	82957	259	Da-Tone Rock Products	15-00-2005	976.18
04/19	04/18/2019	82958	1	Julie Melka	20-00-2005	111.47
04/19	04/18/2019	82959	1	Robert & Karen Peet	20-00-2005	300.00
04/19	04/18/2019	82960	3342	Fastenal	15-00-2005	153.44
04/19	04/18/2019	82961	2186	Ferguson Waterworks #3011	20-00-2005	575.00
04/19	04/18/2019	82962	4646	Frontier	25-00-2005	876.61
04/19	04/18/2019	82963	282	Gov't Finance Officers Assn	10-00-2005	160.00
04/19	04/18/2019	82964	139	Harbor Logging Supply	15-00-2005	829.90
04/19	04/18/2019	82965	5924	Holly's Handyman LLC	10-00-2005	440.00
04/19	04/18/2019	82966	5596	Rob Johnson	10-00-2005	104.00
04/19	04/18/2019	82967	5558	Ray Marrington	10-00-2005	104.00
04/19	04/18/2019	82968	5155	Oregon Department of Revenue	10-00-2005	920.00
04/19	04/18/2019	82969	4	VVA	10-00-2005	126.00
04/19	04/18/2019	82970	5768	Proficient Auto Center Inc	25-00-2005	294.90
04/19	04/18/2019	82971	4815	Platt	50-00-2005	1,758.12

M = Manual Check, V = Void Check

GL Period	Check Issue Date	Check Number	Vendor Number	Payee	Check GL Account	Amount
04/19	04/18/2019	82972	5900	Wells Fargo Equipment Finance	25-00-2005	1,291.67
04/19	04/25/2019	82973	4058	44Mag Distributing LLC	10-00-2005	1,200.00
04/19	04/25/2019	82974	1169	Brookings Electronic Svs Inc	50-00-2005	2,150.58
04/19	04/25/2019	82975	183	Colvin Oil Company	10-00-2005	2,643.38
04/19	04/25/2019	82976	1	Mike Boronda	20-00-2005	300.00
04/19	04/25/2019	82977	1	David & Nancy Jerse	20-00-2005	300.00
04/19	04/25/2019	82978	2186	Ferguson Waterworks #3011	50-00-2005	2,671.71
04/19	04/25/2019	82979	4646	Frontier	30-00-2005	200.09
04/19	04/25/2019	82980	1431	Lea Construction Inc	50-00-2005	429.00
04/19	04/25/2019	82981	5888	Lehr	10-00-2005	419.40
04/19	04/25/2019	82982	3789	Oak Street Health Care Center	25-00-2005	150.00
04/19	04/25/2019	82983	5886	Office Depot Inc	10-00-2005	195.13
04/19	04/25/2019	82984	4	Michael Kinnaird	10-00-2005	218.00
04/19	04/25/2019	82985	5768	Proficient Auto Center Inc	25-00-2005	198.00
04/19	04/25/2019	82986	5298	Sea Clear Window Cleaning	10-00-2005	850.00
04/19	04/25/2019	82987	5925	TerraFirma Foundation Systems	10-00-2005	60.00
04/19	04/25/2019	82988	142	Tidewater Contractors Inc	52-00-2005	621.14
04/19	04/25/2019	82989	861	Village Express Mail Center	10-00-2005	57.45
04/19	04/25/2019	82990	4135	Jim Watson	10-00-2005	94.00
04/19	04/25/2019	82991	5920	Worthington Direct Inc	10-00-2005	113.25
04/19	04/25/2019	82992	4131	Zumar Industries Inc	15-00-2005	694.58

Grand Totals: 300,985.04

Dated: \_\_\_\_\_

Mayor: \_\_\_\_\_

City Council: \_\_\_\_\_

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City Recorder: \_\_\_\_\_

Report Criteria:  
 Report type: Summary

## Committee Vacancies

Date: May 13, 2019

**Re: Vacant Volunteer Positions**

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Following is a list of all Commission/Committee positions and terms currently vacant:

Position	Held By	Month/ Day	Year Expires	Term/ Years
Parks & Rec #1	VACANT	2/1	2020	2
Parks & Rec #5	VACANT	2/1	2022	2
Planning Commission #3	VACANT	4/1	2020	4
Planning Commission #5	VACANT	4/1	2021	4