

City Motto: HIGH Tech, HIGHER Education, HIGHEST Quality of Life

City Mission Statement: The mission of the City of Pullman is to provide the highest quality of life through essential infrastructure, public safety, recreation, and welcoming growth within the constraints of fiscally responsible government.

The Pullman City Council welcomes you to tonight's meeting. The Council appreciates and encourages public participation. For regular agenda items, an opportunity for public comment is usually provided after the staff report. However, the formality of procedures varies with the purpose and subject of the agenda item; therefore, the Mayor may exercise discretion in deciding when to allow public comment during the course of the proceedings and limitations will be placed on the time allowed for comments. Citizens wishing to comment on business which is not on the agenda will be provided the opportunity to do so under NEW BUSINESS. If you plan to address the Council, you will find a list of "Tips for Addressing the Council" on the public information table in the City Council Chambers. Thank you for your interest in City government.

A. Roll Call: _____ Francis Benjamin _____ Barney Waldrop
 _____ Keith Bloom _____ Nathan Weller
 _____ Ann Heath _____ Pat Wright
 _____ Bill Paul

B. Announcements

C. Report - Fireworks Enforcement

D. Consent Agenda

The items listed under the Consent Agenda are considered to be routine in nature and will be enacted by a single motion of the Council without separate discussion. If separate discussion is desired, that item may be removed from the Consent Agenda and placed on the Regular Agenda by Council action.

Motions

1. Dispense with the reading of the minutes of the regular meeting of June 30, 2009, and approve them as submitted.
2. A motion to approve Accounts Payable Checks, Payroll Checks, and Electronic Transfers for July, 2009.

E. Regular Agenda

Discussions

3. Illicit Discharge Detection & Elimination (IDDE) Ordinance
4. Solar Powered Street Lights
5. Whitman County Humane Society Request

F. New Business

Members of the public may bring items of new business to the attention of the Council under this agenda item. However, we strongly encourage advising the Mayor or City Supervisor of your intention prior to the meeting to ensure the item is properly an item of new business and, if not, if the matter could be addressed in some other manner.

G. Tentative Council Agenda for July 14, 2009 - Canceled

Tentative Council Agenda for July 21, 2009

Public Hearing - CIP

Public Hearing - TIP

Whitman County Humane Society Contract

Adopt Stormwater Ordinance

Public Hearing - Transit Service & Staffing Levels

Tentative Planning Commission Agenda for July 22, 2009

No business scheduled at this time

Tentative Board of Adjustment Agenda for July 20, 2009

No business scheduled at this time

THE COUNCIL CHAMBERS ARE ACCESSIBLE TO PERSONS WITH DISABILITIES. PERSONS REQUIRING SPECIAL ACCOMMODATIONS, SHOULD CONTACT THE FINANCE DEPARTMENT BEFORE 5:00 P.M. THE MONDAY PRECEDING THE COUNCIL MEETING. THE FINANCE DEPARTMENT IS LOCATED ON THE FIRST FLOOR OF CITY HALL, 325 SE PARADISE STREET, PULLMAN, WA 99163. TELEPHONE NUMBER 338-3209 or 338-3208, FAX NUMBER 334-2751, ADD NUMBER 7-1-1.

MINUTES OF THE CITY COUNCIL
OF THE CITY OF PULLMAN
JUNE 30, 2009

Roll Call

A regular meeting of the City Council of the City of Pullman was held on June 30, 2009, at 7:30 p.m. in Council Chambers, City Hall, Pullman, Washington with the following present:

Glenn A. Johnson	Mayor
Troy Woo	Finance Director
Francis Benjamin	Councilmember
Keith Bloom	Councilmember
Ann Heath	Councilmember
Bill Paul	Councilmember
Barney Waldrop	Councilmember
Nathan Weller	Councilmember
Pat Wright	Councilmember

Call to Order

Mayor Johnson called the regular meeting to order at 7:30 p.m.

Announcements

Mayor Johnson made two announcements.

Employee Recognition

Mayor Johnson, City Supervisor Sherman, City Councilmembers, and Whitman County Commissioner Greg Partch made farewell statements to Finance Director Woo.

Confirmation of Appointment

Mayor Johnson announced that he had appointed Jeff Babbitt as Interim Finance Director. Mayor Johnson introduced Jeff Babbitt, who was in the audience, to the Council and audience. Councilmember Heath moved, Councilmember Wright seconded to confirm the appointment.

Motion Carried.

Reports

2009 Fireworks Enforcement

Mayor Johnson announced that a report is scheduled on 2009 fireworks enforcement. Rich Dragoo, Fire Prevention Officer, presented a staff report that included a description of the fireworks stand permits that were issued this year, a review of the fireworks regulations, and described education efforts that have taken place.

Police Chief Weatherly presented a staff report that included a description of the current enforcement efforts and a review of past enforcement actions.

Rod Thornton, Transit Manager, described the Transit service that would be available on July 3 and 4.

Mayor Johnson announced that Main Street would be closed near Sunnyside Park on the 4th of July for safety reasons.

Current Economic Conditions

City Supervisor Sherman presented a staff report which included a description of the overall economic conditions. Finance Director Woo presented a staff report on key economic factors for the City of Pullman. Councilmember Heath commented that the State's decision to lower the pension contributions could be a missed opportunity to make up investment income. Finance Director Woo responded. Councilmember Wright asked for specific areas that Pullman will be challenged with in the future. Finance Director Woo responded. City Supervisor Sherman described budget information that was gathered at the recent AWC conference and made closing comments on the current economic conditions.

ORDER OF BUSINESS

Approval of Recommendations of Consent Agenda Items

CONSENT AGENDA

Mayor Johnson reviewed the items on the Consent Agenda with the Council and audience. He stated that items listed on the Consent Agenda are considered to be routine in nature and will be enacted by a single motion of the Council without separate discussion. If separate discussion is desired, that item may be removed from the Consent Agenda and placed on the Regular Agenda by Council request. Councilmember Wright moved, Councilmember Benjamin seconded to read the items on the Consent Agenda by title only.

Motion Carried.

City Attorney McAloon read the items on the Consent Agenda by title only. Mayor Johnson asked if there were any requests for removal of items from the Consent Agenda from either the Council or audience. Councilmember Waldrop requested that item No. 8 be removed for separate discussion. Councilmember Paul moved,

Councilmember Benjamin seconded to adopt items 1 through 7 and 9 on the Consent Agenda.

Motion Carried.

Motions

- | | | |
|---|----|---|
| Minutes - June 2, 2009 | 1. | The Council dispensed with the reading of the minutes of the regular meeting of June 2, 2009, and approved them as submitted. |
| Minutes - June 22, 2009 | 2. | The Council dispensed with the reading of the minutes of the special meeting of June 22, 2009. |
| Request for Money from the Shirrod Family Memorial Fund | 3. | The Council authorized requesting \$2,830.98 from the Shirrod Family Memorial Fund for the Neill Public Library Shirrod Heritage Addition. |
| Claim for Damages - Mikalson | 4. | The Council referred a Claim for Damages submitted by Amanda Louise Mikalson for an undetermined amount to the Washington Cities Insurance Authority (WCIA). |
| Claim for Damages - Quinlan | 5. | The Council referred a Claim for Damages submitted by Robert and Marsh Quinlan for the sum of \$1,267.09 to the Washington Cities Insurance Authority (WCIA). |

Resolutions

- | | | |
|--|-----|---|
| Resolution No. R-33-09 - Public Hearing Date | 6a. | Resolution No. R-33-09

A RESOLUTION SETTING JULY 21, 2009 AS THE DATE FOR A PUBLIC HEARING FOR THE ADOPTION OF A SIX-YEAR CAPITAL IMPROVEMENT PROGRAM FOR THE CITY OF PULLMAN FOR THE YEARS 2010 THROUGH 2015.

Resolution No. R-33-09 was adopted unanimously. |
| Resolution No. R-34-09 - Public Hearing Date | 6b. | Resolution No. R-34-09

A RESOLUTION SETTING JULY 21, 2009 AS THE DATE FOR A PUBLIC HEARING FOR THE ADOPTION OF A SIX-YEAR TRANSPORTATION IMPROVEMENT PROGRAM FOR THE CITY OF PULLMAN FOR THE YEARS 2010 THROUGH 2015.

Resolution No. R-34-09 was adopted unanimously. |
| Resolution No. R-35-09 - Surplus Property | 7. | Resolution No. R-35-09

A RESOLUTION DECLARING CERTAIN PROPERTY SURPLUS TO THE NEEDS OF THE CITY OF PULLMAN AND AUTHORIZING THE DONATION OF SAID SURPLUS |

PROPERTY, TO-WIT: BICYCLES TO INTERNATIONAL FRIENDSHIP ASSOCIATION, A NON-PROFIT CHARITABLE ORGANIZATION.

Resolution No. R-35-09 was adopted unanimously.

Ordinance

Ordinance No.
09-16 - Quit
Claim Deed

9. Ordinance No. 09-16

AN ORDINANCE ACCEPTING A QUIT CLAIM DEED FROM BIRCH HILLS, LLC, A WASHINGTON LIMITED LIABILITY COMPANY.

Ordinance No. 09-16 was adopted unanimously.

REGULAR AGENDA

Resolution

Resolution No.
R-36-09 - Public
Hearing Date

8. Mayor Johnson announced that this item had been removed from the Consent Agenda at the request of Councilmember Waldrop. Councilmember Waldrop wanted to bring to the public's attention that on July 21 there would be a public hearing establishing Transit service and noted that a new service for a "Senior Shuttle" would be included in that discussion and hoped that those who were interested would participate.

Resolution No. R-36-09 by title only reads as follows:

A RESOLUTION SETTING A DATE FOR A PUBLIC HEARING TO CONSIDER AND ESTABLISH 2009-2010 TRANSIT FIXED-ROUTE AND DIAL-A-RIDE SERVICE AND STAFFING LEVELS.

Councilmember Waldrop moved, Councilmember Benjamin seconded adopt Resolution No. R-36-09. The motion carried unanimously.

Public Hearing

Ordinance No.
09-17 - Willow
Street Vacation

10. Mayor Johnson announced that an ordinance had been prepared vacating a portion of Willow Street. Deputy Public Works Director Gardes presented the staff report. There were no questions from the Council. Mayor Johnson opened the public hearing. There were no comments from the public. Mayor Johnson closed the public hearing.

Ordinance No. 09-17 by title only reads as follows:

AN ORDINANCE VACATING A PORTION OF WILLOW STREET BETWEEN SOUTH STREET AND JACKSON STREET IN THE WILKINSON'S ADDITION.

Councilmember Bloom moved, Councilmember Heath seconded to adopt Ordinance No. 09-17. The motion carried unanimously.

Resolutions

Resolution No. 11. Mayor Johnson announced that a resolution had been prepared authorizing the extension of a City water main. Public Works Director Workman presented the staff report. Mayor Johnson stated that the City appreciated the cooperation that has taken place with the Whitman County Humane Society.

R-37-09 - Extension
of a City Water
Main

Resolution No. R-37-09 by title only reads as follows:

A RESOLUTION AUTHORIZING WHITMAN COUNTY HUMANE SOCIETY PARTICIPATION IN THE EXTENSION OF A CITY WATER MAIN IN JOHNSON AVENUE AND RESCINDING RESOLUTION R-90-08.

Councilmember Waldrop moved, Councilmember Wright seconded to adopt Resolution No. R-37-09. The motion carried unanimously.

Resolution No. 12. Mayor Johnson announced that a resolution had been prepared authorizing and directing the trade of property. Public Works Director Workman presented the staff report. Councilmember Heath asked for an explanation on the appraisal valuation and why the City is paying more than the appraisal. Public Works Director Workman responded. Councilmember Benjamin asked if there were any concerns with future FAA or Homeland Security limitations with the trade of property that was located across from the Airport. Public Works Director Workman responded. Councilmember Paul asked if the road that will approach the water reservoir will be open to the owner of the adjacent property. Public Works Director Workman responded. Councilmember Bloom asked if the property is currently being farmed. Public Works Director Workman responded. Councilmember Bloom noted that the land swap will cause an impact to the farm operation and that should be considered in the price being paid for the property.

R-38-09 - Purchase
and Trade of
Property

Resolution No. R-38-09 by title only reads as follows:

A RESOLUTION AUTHORIZING AND DIRECTING THE TRADE OF PROPERTY WITH AND THE PURCHASE OF PROPERTY FROM KEITH KOPF, LLC.

Councilmember Waldrop moved, Councilmember Benjamin seconded to adopt Resolution No. R-38-09. The motion carried unanimously.

Motions

Purchase of
Transit Buses

13. Mayor Johnson announced that a motion is requested authorizing the purchase of one 35' and four 40' low-floor buses for Transit. Transit Manager Thornton presented the staff report. Councilmember Bloom asked how long it will take to build the buses. Transit Manager Thornton responded. Councilmember Heath asked if the motion is approved will it lock in the prices for the next 18 months. Transit Manager Thornton responded. Councilmember Bloom asked which fuel the buses would use. Transit Manager Thornton responded. Mayor Johnson asked what the price difference was between diesel and hybrid buses. Transit Manager Thornton responded. Councilmember Paul asked if there was any risk in locking prices now and seeing a downward trend to bus prices in the future. Transit Manager Thornton responded. Councilmember Benjamin asked if diesel buses could compromise future use because of future environmental regulations. Transit Manager Thornton responded. Mayor Johnson asked how many passengers could be transported on a 40' bus. Transit Manager Thornton responded. Mayor Johnson asked if the 40' buses were tested on Pullman streets. Transit Manager Thornton responded.

Councilmember Paul moved, Councilmember Heath seconded to approve the purchase of one 35' and four 40' low-floor buses from Gillig Corporation. The motion carried unanimously.

Purchase of
Camera Systems
for Transit

14. Mayor Johnson announced that a motion is requested approving the purchase of camera systems for Transit. Transit Manager Thornton presented the staff report. Councilmember Bloom asked if the cameras would be monitored real time or used for archive reference. Transit Manager Thornton responded. Councilmember Bloom and Transit Manager Thornton discussed the potential costs of storage and retention of the video.

Councilmember Wright asked for clarification on the cost versus available federal stimulus funding. Transit Manager Thornton responded. Councilmember Heath noted that this has been a long-term project but there are still many unanswered questions. Transit Manager Thornton responded. Councilmember Benjamin asked if there were any maintenance contract commitments and what the cost of the maintenance contract would be. Transit Manager Thornton and Transit Operations Supervisor Chris Mitchell responded. Mayor Johnson asked if there was a track record of other Transit systems using cameras. Transit Manager Thornton responded.

Councilmember Benjamin moved, Councilmember Waldrop seconded to approve the purchase of camera systems. The motion carried six to one with Councilmember Bloom voting nay.

Discussion

Water/Sewer
Financial Plan
and Rate Study

15. Mayor Johnson announced that a discussion is scheduled on water/sewer rates. Public Works Director Workman presented a staff report that included a history and brief overview of the proposed rates. Shawn Koorn from HDR Engineering, Inc., presented a report that described the rate setting process, Pullman's revenue requirements for its utilities, the water financial plan, water rates, sewer financial plan, and sewer rates. Councilmember Waldrop noted in the report that 2014 showed a zero reserve balance for capital and asked if that meant the reserve would be zero. Shawn Koorn responded. Councilmember Heath asked if the conservation rates for water included the potential for volume reduction. Mr. Koorn responded. Public Works Director Workman noted that the 20 percent adjustment to large water volume customers was a one-time adjustment in 2009 and not throughout the five-year schedule. Mr. Koorn responded. Councilmember Benjamin asked how the comparable water utilities were chosen. Mr. Koorn responded. Councilmember Waldrop asked what the City of Spokane's water rates were. Mr. Koorn and Mayor Johnson responded. Councilmember Waldrop asked if the irrigation water was less expensive than the residential water rates. Mr. Koorn responded. Councilmember Waldrop stated that he thought irrigation should be at a premium cost. Public Works Director Workman and Mr. Koorn responded. Mayor Johnson asked how many irrigation accounts

the City had. Mr. Koorn responded. Mayor Johnson, Councilmember Waldrop, Councilmember Heath, Councilmember Benjamin, Public Works Director Workman, and Mr. Koorn discussed irrigation rate philosophies. The City Council concurred to steepen the irrigation rates. Mayor Johnson noted that the Public Works Trust Fund Loans were not funded by the State in the next biennium budget. Public Works Director Workman responded. Councilmember Bloom asked for clarification on the reserve deficiency numbers. Mr. Koorn responded. Public Works Director Workman made closing comments and described staff's goal for the schedule to adopt rates. Councilmember Waldrop asked if the sewer treatment plant projects that were deferred were discretionary projects or required because of environmental regulations. Public Works Director Workman responded. Councilmember Waldrop thought that the projects that were deferred should be moved forward to take advantage of rates and the favorable construction environment. Public Works Director Workman and Finance Director Woo responded. Councilmember Bloom noted that the proposed rates were an overall \$300 annual increase for residential accounts which would be hard for Pullman's residents to absorb with zero salary increases, but at the same time the City is facing a risk of a degradation of its system. Councilmember Bloom stated he would not support rate increases without further public education and public forums.

Councilmember Benjamin stated he had heard that some jurisdictions are being forced to raise rates because of state requirements and asked for comments. Mr. Koorn and Public Works Director Workman responded. Public Works Director Workman summarized the Council direction on water and sewer rates.

- Stormwater
16. Mayor Johnson announced that a discussion is scheduled on stormwater. Stormwater Services Program Manager Rob Buchert presented a staff report that included a description of the Department of Ecology permit relief and a summary of future stormwater ordinances that need to be adopted. Councilmember Waldrop asked for the status of developing a rate structure for undeveloped property. Stormwater Services Program Manager Buchert responded. Mayor Johnson pointed out that within the agenda packet is a very good history and background memo that was prepared by City Supervisor Sherman.

Stormwater Services Program Manager Buchert announced that the Palouse Basin Water Summit will take place on October 6 and that stormwater would be a topic at the summit.

2010 WSU Fire and Emergency Medical Agreement 17.

Mayor Johnson announced that a discussion is scheduled on the 2010 Fire and Emergency Medical Protection Services agreement with WSU. City Supervisor Sherman presented a staff report which included a description of the contract negotiations that have taken place and included information on the fire SAFER grant opportunities. Councilmember Benjamin expressed concerns with accepting the SAFER grants because it will commit the City to maintaining certain staffing levels. City Supervisor Sherman responded. Councilmember Waldrop stated he appreciated the reference to the City of Cheney and Ellensburg funding models and that all Washington state jurisdictions that have higher education institutions should be reviewed and consideration should be made for a uniform funding model. City Supervisor Sherman responded. City Council concurred to proceed with the agreement as negotiated by staff.

NEW BUSINESS

There was no new business.

EXECUTIVE SESSION

Mayor Johnson announced that the Council would adjourn to Executive Session for:

To review the performance of a public employee and to discuss the strategy or position to be taken by the City during the course of collective bargaining or grievance proceedings.

Mayor Johnson adjourned the meeting at 10:03 p.m. and announced that a five-minute recess would take place and the Executive Session would last thirty minutes.

Mayor Johnson reconvened the regular meeting at 10:38 p.m.

ADJOURNMENT

Councilmember Wright moved, Councilmember Weller seconded to adjourn the regular meeting of the City Council.

Motion Carried.

Mayor Johnson adjourned the regular meeting of the City Council at 10:38 p.m.

Mayor

ATTEST:

Finance Director

REQUEST FOR COUNCIL ACTION

For Meeting of: July 7, 2009

ACTION REQUESTED

Motion approving disbursements represented by accounts payable checks numbered _____ through _____ totaling \$ _____ inclusive, _____ payroll checks numbered _____ through _____ totaling \$ _____ inclusive, and electronic transfers totaling \$ _____ and direct that they be paid upon approval of the Auditing Officer and Audit Committee.

BACKGROUND

Motion will approve payment of claims, wages, and transfers for July, 2009.

RECOMMENDATION

Passage of the motion.

FISCAL IMPACT

\$ _____ Budgeted Expenditures

BARS Code Number

SUBMITTED BY

ATTACHMENTS FOR COUNCIL REVIEW/ACTION

Troy Woo
Name

1. None

Finance Director
Title

Finance
Department

REVIEWED BY

	Initial	Date
Department Head	<u>TW</u>	<u>7/1/09</u>
City Supervisor	<u>JSD</u>	<u>7/2/09</u>
City Attorney (As To Form)	<u>lmj</u>	<u>7-2-09</u>

3. ILLICIT DISCHARGE DETECTION & ELIMINATION (IDDE) ORDINANCE

STAFF REPORT

QUESTIONS FROM COUNCIL ON STAFF REPORT

DISCUSSION

ACTION TAKEN

NOTES:



City of Pullman
Public Works Department
MEMORANDUM

TO: Mayor and City Council
FROM: Rob Buchert, Stormwater Services Program Manager *RMB*
RE: Illicit Discharge Detection & Elimination (IDDE) Ordinance Discussion
DATE: July 1, 2009

ATTACHMENTS:

- 1) Draft IDDE Ordinance

The city of Pullman has been under the NPDES Phase II Municipal Stormwater Permit for Eastern Washington (Permit) since February 16, 2007. The Permit requires the city to develop and implement a comprehensive stormwater management program by February 15, 2012. One of the program elements the city is required to implement is an illicit discharge detection and elimination (IDDE) program. The deadline for having an IDDE program in place is August 16, 2009.

A draft IDDE ordinance has been included in the Council's packet for discussion. The draft ordinance was developed by a committee of city staff including Public Works Director, Mark Workman; Deputy Public Works Director, Kevin Gardes; Stormwater Services Program Manager, Rob Buchert; Finance Director, Troy Woo; and City Attorney, Laura McAloon. The committee obtained an example ordinance from stormwater consultants Otak, Inc. which was modeled after other jurisdictions' existing ordinances (mostly Western Washington communities). The committee also referenced the Washington Department of Ecology's guidance document on how to create IDDE regulations that satisfy the requirements of the Permit. The committee used the example as a foundation from which to build and recommend an ordinance suitable for Pullman.

A few notes about the draft IDDE ordinance:

- It is consistent with and reinforces other related sections of city code including Chapters 5.01 (Pullman Nuisance Control Code), 5.40 (Solid Waste Collection and Removal) and 5.45 (Litter Control).
- It is flexible enough to avoid being too heavy handed, but provides for appropriate enforcement responses for significant violations or repeat offenses.

- It addresses the State's concern over residential vehicle washing without making the practice "illegal".
- It satisfies the minimum requirements of the Permit in its current form.

With Council's concurrence, it is staff's intention to distribute the draft IDDE ordinance for public review and comment and return to the July 21st Council meeting to request adoption.

ORDINANCE NO. 09-

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF PULLMAN, WHITMAN COUNTY, WASHINGTON, RELATING TO STORMWATER, ADOPTING REGULATIONS FOR ILLICIT DISCHARGE DETECTION AND ELIMINATION AND ADDING A NEW CHAPTER 10.31 TO TITLE 10 PUBLIC SERVICES AND UTILITIES OF THE PULLMAN CITY CODE AND OTHER MATTERS PROPERLY RELATED THERETO.

WHEREAS, the City of Pullman (the "City") is regulated under the Washington State Department of Ecology's Eastern Washington Phase II Municipal Stormwater Permit (the "Permit"); and

WHEREAS, the Permit became effective on February 16, 2007, and contains various requirements for stormwater management and operations that must be implemented over the 5-year permit term ending February 15, 2012; and

WHEREAS, the Permit broadly applies to City activities that include maintenance and operations of City facilities, permitting of development, inspections and enforcement of regulations, and other activities conducted in the City's Municipal Separate Storm Sewer System; and

WHEREAS, the City will be adopting code policies and procedures as needed to comply with the Permit; and

WHEREAS, the proposed Illicit Discharge Detection and Elimination chapter becomes an addition to the Pullman City Code intended to meet Condition S5.B.3 of the Permit with the goal of improving and maintaining water quality in compliance with the Clean Water Act.

NOW, THEREFORE, the City Council of the city of Pullman do ordain as follows:

Section 1: There is hereby added a new Chapter 31 to Title 10 of the Pullman City Code entitled Illicit Discharge Detection and Elimination.

Section 2: There is hereby added a new section 10.31.010 to

1 the Pullman City Code to read as follows:

2 10.31.010 Purpose. The purpose of this chapter is to
3 regulate the city's municipal separate storm sewer system ("MS4
4 or stormwater drainage system") regarding the introduction of
5 pollutants that would adversely impact surface and groundwater
6 quality of the state of Washington in order to comply with
7 requirements of the city's National Pollutant Discharge
8 Elimination System ("NPDES") permit. The intent of this chapter
9 is to:

10 (1) Control the introduction of pollutants to the
11 stormwater drainage system by any person and/or
12 entity.

13 (2) Prohibit illicit connections and discharges to the
14 stormwater drainage system and receiving waters.

15 (3) Establish legal authority to carry out all inspection,
16 surveillance, monitoring and enforcement procedures
17 necessary to ensure compliance with this chapter.

18 Section 3: There is hereby added a new section 10.31.020 to
19 the Pullman City Code to read as follows:

20 10.31.020 Definitions.

21 (1) "Best management practices" or "BMPs" means the
22 schedules of activities, prohibitions of practices,
23 maintenance procedures, and structural and/or
24 managerial practices approved by the City that, when
25 used singly or in combination, prevent or reduce the
26 release of pollutants and other adverse impacts to
27 receiving waters.

28 (2) "Clean Water Act" means the federal Water Pollution
29 Control Act (33 U.S.C. 1251 et seq.), and any
30 subsequent amendments thereto.

- 1 (3) "Hazardous materials" means any material, including
2 any substance, waste, or combination thereof, which
3 because of its quantity, concentration, or physical,
4 chemical, or infectious characteristics may cause, or
5 significantly contribute to, a substantial present or
6 potential hazard to human health, safety, property, or
7 the environment when improperly treated, stored,
8 transported, disposed of, or otherwise managed.
- 9 (4) "Illicit discharge" means any direct or indirect non-
10 stormwater discharge to the Municipal Separate Storm
11 Sewer System (MS4) or waters of the state prohibited
12 under this chapter.
- 13 (5) "Illicit connection" is defined as the following: Any
14 drain, conveyance, or hydraulic connection, whether
15 surface or subsurface, which allows an illegal
16 discharge to enter the stormwater drainage system
17 including, but not limited to, any conveyances which
18 allow sewage or processed wastewater to enter the
19 stormwater drainage system and any connections to the
20 stormwater drainage system from indoor drains and
21 sinks, regardless of whether the connection had been
22 previously allowed, permitted, or approved by the city
23 or other authorized public agency.
- 24 (6) "Municipal Separate Storm Sewer System (MS4)" or
25 "Stormwater drainage system" means the system of
26 conveyances including sidewalks, municipal streets,
27 catch basins, curbs, gutters, ditches, man-made
28 channels, detention facilities, storm drains or any
29 other facilities owned and operated by the city and
30 designed or used for collecting, conveying or treating
31 stormwater.

1 (7) "National Pollutant Discharge Elimination System
2 (NPDES) Phase II Permit" means the "Eastern Washington
3 Phase II Municipal Stormwater Permit" issued by the
4 Washington State Department of Ecology to the City
5 with an effective date of February 16, 2007 and
6 subsequent reissues.

7 (8) "Non-stormwater discharge" means any discharge to the
8 stormwater drainage system that is not composed
9 entirely of stormwater.

10 (9) "Pollutant" or "Pollution" shall be construed to mean
11 such contamination or other alteration of the
12 physical, chemical, or biological properties of any of
13 the waters of the state including, change in
14 temperature, taste, color, turbidity, or odor of the
15 waters or such discharge of any liquid, gaseous,
16 solid, radioactive, or other substance into any waters
17 of the state that will or is likely to create a
18 nuisance or render such waters harmful, detrimental,
19 or injurious, to the public health, safety, or
20 welfare, or to domestic, commercial, industrial,
21 agricultural, recreational, or other legitimate
22 beneficial uses, or to livestock, wild animals, birds,
23 fish, or other aquatic life; as defined in RCW
24 90.48.020 as now existing or hereafter amended.

25 (10) "Stormwater" means surface water runoff resulting from
26 natural springs, rainfall, snowmelt, or other
27 precipitation.

28 (11) "Wastewater" or "Process wastewater" means any liquid
29 or water which, during manufacturing or processing,
30 comes into direct contact with or results from the
31 production or use of any raw material, intermediate

product, finished product, byproduct, or waste product.

(12) "Watercourse" and "river or stream" means any portion of a channel, bed, bank, or bottom waterward of the ordinary high water line of waters of the state including areas in which fish may spawn, reside, or through which they may pass, and tributary waters with defined bed or banks, which influence the quality of fish habitat downstream. This includes watercourses which flow on an intermittent basis or which fluctuate in level during the year and applies to the entire bed of such watercourse whether or not the water is at peak level. This definition does not include irrigation ditches, canals, stormwater run-off devices, or other entirely artificial watercourses, except where they exist in a natural watercourse which has been altered by humans.

(13) "Waters of the state" means all lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and water courses within the jurisdiction of the state of Washington as defined in RCW 90.48.

Section 4: There is hereby added a new section 10.31.030 to the Pullman City Code to read as follows:

10.31.030 Applicability. This chapter shall apply to all water entering the stormwater drainage system and waters of the state within the city jurisdiction.

Section 5: There is hereby added a new section 10.31.040 to the Pullman City Code to read as follows:

10.31.040 Administration. The Public Works Director or designee shall administer this chapter and shall be referred to

1 as the Administrator. The Administrator shall have the
2 authority to develop and implement procedures to administer and
3 enforce this chapter.

4 Section 6: There is hereby added a new section 10.31.050 to
5 the Pullman City Code to read as follows:

6 10.31.050 General provisions.

7 (1) Prohibition of Illicit Discharges.

8 (a) It is unlawful for any person to discharge one or
9 more pollutants into any of the MS4 or waters of
10 the state such that the discharge either:

11 (i) causes or contributes to a violation of
12 applicable State Water Quality Standards;
13 or

14 (ii) causes or contributes to a violation of
15 the City's NPDES Phase II permit.

16 (b) Prohibited discharges include, but are not
17 limited to, the following:

18 (i) Trash or debris;

19 (ii) Construction materials;

20 (iii) Petroleum products including, but not
21 limited to, oil, gasoline, grease, fuel
22 oil, heating oil;

23 (iv) Antifreeze and other automotive products;

24 (v) Metals;

25 (vi) Flammable or explosive materials;

26 (vii) Chemicals not normally found in
27 uncontaminated water;

28 (viii) Acids, alkalis, or bases;

29 (ix) Painting products;

30 (x) Degreasers and/or solvents;

31 (xi) Drain cleaners;

- (xii) Commercial and household cleaning products;
- (xiii) Pesticides, herbicides, or fertilizers;
- (xiv) Steam cleaning wastes;
- (xv) Pressure washing wastes;
- (xvi) Soaps, detergents, or ammonia;
- (xvii) Chlorinated spa or swimming pool water;
- (xviii) Domestic or sanitary sewage;
- (xix) Animal carcasses;
- (xx) Food wastes;
- (xxi) Yard wastes;
- (xxii) Any hazardous material or waste;
- (xxiii) Non-NPDES permitted wastewater.

(c) The following discharges are not prohibited unless the Administrator determines that the type and/or amount of discharge is causing significant contamination of surface water:

- (i) Diverted stream flows (i.e., channeled or piped streams);
- (ii) Rising ground waters and springs;
- (iii) Flows from riparian habitats and wetlands.
- (iv) Uncontaminated ground water infiltration (as defined in 40 C.F.R. 35.2005(20));
- (v) Uncontaminated pumped ground water;
- (vi) Foundation, footing and roof drains;
- (vii) Air conditioning condensation;
- (viii) Irrigation water from agricultural sources that is commingled with urban stormwater;
- (ix) Water from crawl space pumps;

- (x) Non-stormwater discharges covered by another NPDES permit;
- (xi) Discharges from emergency fire fighting activities;
- (xii) Discharges specified in writing by the Administrator as being necessary to protect public health and safety.

(d) The following types of discharges shall only be permitted if the stated conditions are met:

- (i) Discharges from potable water sources, including water line flushing, fire hydrant system flushing, and pipeline hydrostatic test water; planned discharges shall be de-chlorinated to a concentration of 0.1 ppm or less, pH-adjusted if necessary, and volumetrically and velocity controlled to prevent re-suspension of sediments in the stormwater drainage system;
- (ii) Discharges from lawn watering and other irrigation runoff; these discharges shall be minimized through water conservation efforts;
- (iii) Dechlorinated spa or swimming pool discharges; these discharges shall be dechlorinated to a concentration of 0.1 ppm or less, pH-adjusted and reoxygenized if necessary, and volumetrically and velocity controlled to prevent re-suspension of sediments in the stormwater drainage system. Spa or swimming pool

1 cleaning wastewater and filter backwash
2 shall not be discharged to the stormwater
3 drainage system.

4 (iv) Discharges of street and sidewalk wash
5 water, water used to control dust, and
6 routine external building wash down that
7 does not use detergents; these discharges
8 shall be minimized by the city through
9 public education activities. At active
10 construction sites, street sweeping must
11 be performed prior to washing the street.

12 (v) Discharges of non-toxic dye testing with
13 verbal notification to the city at least
14 twenty-four (24) hours prior to the time
15 of the test;

16 (vi) Discharges resulting from maintenance,
17 repair, or operation of fire fighting
18 equipment and facilities that are not
19 directly associated with public fire
20 fighting, including discharges from
21 public fire fighting training exercises;
22 city-approved best management practices
23 shall be implemented for these
24 discharges.

25 (vii) Discharges of individual residential
26 vehicle washing; this discharge shall be
27 minimized by the city through public
28 education activities and by the
29 individual through application of best
30 management practices.

(e) Discharge prohibitions shall not apply to any non-stormwater discharge permitted under an NPDES permit, waiver, or waste discharge order issued to the discharger and administered under the authority of the Environmental Protection Agency or Washington State Department of Ecology, provided that the discharger is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations, and provided that written approval has been granted for any discharge to the stormwater drainage system.

(2) Prohibition of Illicit Connections.

(a) The construction, use, maintenance or continued existence of illicit connections to the stormwater drainage system is prohibited.

(b) This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.

(3) Violation of Health and Sanitation Codes.

Violation of Chapters 5.01 (Pullman Nuisance Control Code), 5.40 (Solid Waste Collection and Removal), and 5.45 (Litter Control) is prohibited to the extent that it may cause or contribute to pollution of the MS4 or waters of the state.

Section 7: There is hereby added a new section 10.31.060 to the Pullman City Code to read as follows:

10.31.060 General requirements.

(1) Requirement to Eliminate Illegal Discharges.

1 The Administrator may require by written notice that a
2 property owner or person responsible for an illegal
3 discharge immediately, or by a specified date,
4 discontinue the discharge, clean up the polluting
5 matter and, if necessary, take measures to eliminate
6 the source of the discharge to prevent the
7 reoccurrence of discharges.

8 (2) Requirement to Eliminate Illicit Connections.

9 The Administrator may require by written notice that a
10 property owner or person responsible for an illicit
11 connection to the stormwater drainage system eliminate
12 the connection by a specified date, regardless of
13 whether or not the connection had been established or
14 approved previously.

15 (3) Requirement to Implement Best Management Practices.

16 The owner or operator of a commercial or industrial
17 establishment and property owners shall provide, at
18 their own expense, reasonable protection from
19 accidental discharge of prohibited materials or other
20 wastes into the stormwater drainage system or waters
21 of the state through the use of structural and non-
22 structural BMPs (as listed and described in the
23 Stormwater Management Manual for Eastern Washington).
24 The Administrator may require any person responsible
25 for a property or premise, which is, or may be, the
26 source of an illicit discharge to implement, at their
27 own expense, additional structural and non-structural
28 BMPs to prevent the further discharge of pollutants to
29 the stormwater drainage system.

30 (4) Watercourse Protection.

1 Any person owning property through which a watercourse
2 passes shall keep and maintain that part of the
3 watercourse within the property free of trash, debris,
4 and other items that would pollute or contaminate the
5 flow of water through the watercourse.

6 (5) Notification of Illicit Discharges.

7 Notwithstanding other requirements of law, as soon as
8 any person responsible for a facility or operation has
9 information of any known or suspected illicit
10 discharges into the stormwater drainage system or
11 waters of the state, said person shall take all
12 necessary steps to ensure the discovery, containment,
13 and cleanup of such release, and shall notify the
14 Public Works Department through the Illicit Discharge
15 Detection and Elimination hotline (509-338-3213) and,
16 in the case of a hazardous material discharge, Whitcom
17 at 911.

18 Section 8: There is hereby added a new section 10.31.070 to
19 the Pullman City Code to read as follows:

20 10.31.070 Inspections and Investigations.

21 (1) Facility and Property Inspections.

22 The Administrator shall be permitted to enter and
23 inspect facilities subject to regulation under this
24 chapter as often as may be necessary to determine
25 compliance with this chapter and shall have access to
26 all records that must be kept under the conditions of
27 an NPDES permit to discharge stormwater. If a
28 property owner has security measures in force which
29 require proper identification and clearance before
30 entry into its premises, the property or facility

owner/operator shall make the necessary arrangements to allow access to the Administrator.

(2) Monitoring and Sampling.

The Administrator has the right to install or require the property owner to install monitoring equipment as is reasonably necessary in the opinion of the Administrator to conduct appropriate monitoring and/or sampling of the facility's stormwater discharge. The facility's sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the property owner at their expense.

Section 9: There is hereby added a new section 10.31.080 to the Pullman City Code to read as follows:

10.31.080 Enforcement. The Administrator shall be responsible for enforcing this chapter. The Administrator or his designee is authorized to issue violation notices, cease and desist orders, notices of civil infractions, levy penalties, recover costs and/or institute civil actions in the court. Recourse to any single remedy shall not preclude recourse to any other remedy available to the city under City Code or State law.

(1) Failure to Comply a Civil Infraction.

Violation of any provision or failure to comply with any of the requirements of this chapter is a Class 1 civil infraction, subject to enforcement under PCC 1.02. The civil penalty shall be a continuing penalty for each day the violation exists.

(2) Emergency Right of Entry and Reparation.

In the event the Administrator determines any violation of this chapter constitutes an immediate danger to public health or safety, the Administrator and/or designee are authorized to enter upon the

1 subject private property, without giving prior notice,
2 to take any and all measures necessary to abate the
3 violation and/or restore the property. Any costs or
4 expenses related to such enforcement of this chapter
5 by the city shall be fully reimbursed by the property
6 owner and/or responsible party. Any relief obtained
7 under this section shall not prevent the city from
8 seeking further relief or applying other penalties as
9 outlined in PCC 1.02.

10 (3) Gross Misdemeanor.

11 Repeat violations of this chapter within twelve (12)
12 months after having committed a violation of this
13 chapter shall be punishable as a gross misdemeanor
14 pursuant to RCW 90.48.148.

15 (4) Civil Penalty.

16 (a) In addition to any civil infraction fine,
17 criminal penalty, and/or other available sanction
18 or remedial procedure, any person engaging in
19 conduct made unlawful by this chapter shall be
20 subject to a cumulative civil penalty in the
21 amount of \$1,000 per day for each violation from
22 the date set for compliance until the date of
23 compliance.

24 (b) Any such civil penalty shall be imposed by the
25 Administrator in writing and delivered by
26 personal service or first-class mail, postage
27 pre-paid, to the person or entity incurring the
28 penalty, describing the violation with reasonable
29 particularity and ordering any appropriate
30 corrective action to be taken within a specified
31 period of time.

1 (c) Within thirty (30) days after the notice of
2 penalty is issued, the person incurring the
3 penalty may apply in writing to the Administrator
4 for mitigation of such penalty. The
5 Administrator may mitigate the penalty in writing
6 by whatever terms are deemed proper to encourage
7 compliance with this chapter. A mitigation
8 determination is deemed final as of the date it
9 is issued by the Administrator.

10 (d) In lieu of application for mitigation, any
11 penalty imposed pursuant to this chapter may be
12 appealed to the City Hearing Examiner using the
13 appeal procedures set forth in Title 16 of the
14 city code. An appeal must be filed with the city
15 clerk within thirty (30) days after the notice of
16 penalty is issued.

17 (e) Any penalty not timely appealed or mitigated
18 shall be due and payable thirty (30) days after
19 the notice of penalty is issued, or determination
20 of an appeal is final, or a mitigation decision
21 is issued. All civil penalties collected under
22 this section shall be deposited into the city's
23 stormwater fund and shall be used for the
24 protection of surface, ground and storm water as
25 set forth in this chapter.

26 (5) Additional Remedies.

27 (a) In addition to any other remedy provided by this
28 chapter or under the Pullman City Code, the city
29 may initiate injunction or abatement proceedings
30 or any other appropriate action in courts against
31 any person who violates or fails to comply with

1 any provision of this chapter to prevent, enjoin,
2 abate, and/or terminate violations of this
3 chapter and/or to restore a condition which
4 existed prior to the violation. In any such
5 proceeding, the person violating and/or failing
6 to comply with any provisions of this chapter
7 shall be liable for the costs and reasonable
8 attorneys' fees incurred by the city in bringing,
9 maintaining and/or prosecuting such action.

10 (b) Any person who violates any provision of this
11 chapter may also be in violation of the Federal
12 Clean Water Act, NPDES Phase II Permit, and/or
13 RCW 90.48 and may be subject to additional
14 sanctions including civil and criminal penalties.
15 Any enforcement action authorized under this
16 chapter shall also include written notice to the
17 violator of such potential liability.

18 Section 10. Severability. If any one or more section,
19 subsections, or sentences of this ordinance are held to be
20 unconstitutional or invalid, such decision shall not affect the
21 validity of the remaining portion of this ordinance and the same
22 shall remain in full force and effect.

23 Section 11. Effective Date. This ordinance shall be in
24 full force and take effect five (5) days from and after its
25 publication, or a summary thereof is published, in the official
26 newspaper of the city of Pullman.

27 PASSED by the City Council of the city of Pullman at a
28 regular meeting held on the _____ day of _____, 2009.

29 SIGNED by the Mayor in Authentication and Approval Thereof
30 on the _____ day of _____, 2009.

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Mayor Glenn A. Johnson

ATTEST:

Finance Director

Approved as to form:

City Attorney

Summary Published:_____

4. SOLAR POWERED STREET LIGHTS

STAFF REPORT

QUESTIONS FROM COUNCIL ON STAFF REPORT

DISCUSSION

ACTION TAKEN

NOTES:



CITY OF PULLMAN

Administration/Finance


325 S.E. Paradise Street, Pullman, WA 99163

(509) 338-3208 Fax (509) 334-2751

admin@pullman-wa.gov

MEMORANDUM

TO: Mayor and City Council

FROM:  John Sherman, City Supervisor

RE: Discussion of Solar Powered Street Lights

DATE: July 1, 2009

At the City Council meeting on April 28, 2009, we had a presentation by Avista regarding power reliability and solar lighting options. The invitation for Avista to make the presentation came in response to this year's goal-setting process. The following was provided as background information for the April 28 City Council meeting:

At the initial goal-setting retreat on Saturday, March 7, 2009, a goal was suggested relative to inviting Avista Utilities to make a presentation at a City Council meeting. The goal stated:

Invite Avista to a City Council meeting to discuss power disruptions and to discuss upgrades to their area power substations.

At the City Council meeting on March 31, 2009, the list of issues to be addressed was expanded to include solar power issues. The minutes from the March 31, 2009, City Council meeting state:

Director Workman presented an update on the lighting safety issues on College Hill. Councilmember Weller asked if the non-decorative lights could be lowered for cost savings instead of using expensive decorative lights. Councilmember Weller asked if there had been any communication with Avista to use solar powered lighting. Public Works Director Workman responded.

Councilmember Weller asked if a query could be made to Avista regarding solar powered lights. Public Works Director Workman responded. City Supervisor Sherman noted that Avista would be making a presentation to the city Council on April 28 and said that solar power lighting could be added to the discussion.

Solar power was discussed during the Avista presentation at the City Council meeting on April 28. The minutes of the meeting state:

Councilmember Weller described Moscow's use of solar street lights and LED lights and asked how much solar street lighting costs. Mr. Kimmell responded.

The transcript from the City Council meeting on April 28, 2009, provides additional information relative to the discussion between Avista Regional Business Manager Paul Kimmell and City Councilmember Nathan Weller relating to the solar street light issue. The transcript states:

Paul Kimmel AVISTA: Councilman, I did talk with Dave Holmes. He's our research guru and his is down at Idaho National Laboratory as we speak talking about some renewable projects. So we had a conversation about this question of solar street lights. In his opinion, and I trust him, I think he reads the literature, and much of what you see out on the Internet is much of what you see out on the Internet. I think there are some good products out there and I think that technology will continue to improve, but to deploy street lights at any large scale would be fairly expensive and fairly impractical to do. We are putting solar portable panels on our roof at our corporate office right now and I think we're about 800 square feet of panel and that's going to power about 20 kw. So a lot of square footage for very little output. With a streetlight, and even the ones that have the sort of the thin film wrap with that solar collection ability, you know those are based on sunny days. Those don't calculate in a typical Palouse winter where you know it says one recharge will run five days kind of thing. Well, that's based on one full sunny day carrying that through for another four days. There's a lot of practical challenges for deploying this kind of solar technology here. That's not to say it won't happen, because I think it will and I think in certain scales it's going to be good. But one streetlight would probably be at least a 4'x 8' panel to have any sort of illumination, and that illumination then would be very suspect. So I think there's going to be factors that you'll need to weigh as far as security, as far as illumination, and cost. So, I don't mean to be vague or sort of get around this question. We have been looking, we'll continue to look at it, and that technology will continue to improve even more so now with some of the stimulus money and some of what the national labs are doing and some private industry research as well.

City Councilmember Nathan Weller: Well, I understand about the fact that it will continue, I mean, right now as I was doing the research, only about 13 percent of the actual light is converted into energy. I think they've gotten it up to 18 percent in the lab in ... or something like that. However, my concern remains, you know, they do have these walkway ramps in Moscow and so I'm wondering, they're able to use them and they're fairly, it's fairly good illumination, so I'm wondering, obviously the technology is there for at least small-scale utilization.

So, you haven't found anything that's fairly cost-effective or can be used in Pullman vs. Moscow?

Paul Kimmel AVISTA: Well, we won't get into the rivalry issues. I think that's another, maybe next meeting. I can get you some information Councilman, so you can see those kinds of costs and the output on those. I think they have their place and especially in remote areas where you can't run wire. You know you need kind of a self-generation kind of application.

At the City Council meeting on June 30, 2009, Councilmember Nathan Weller asked to provide additional information on the solar power issue. Mayor Glenn A. Johnson stated that due to the length of the agenda for the June 30 meeting that he would request that the issue instead be discussed at the July 7 City Council meeting.

Attached is some additional background information pertaining to solar powered Light Emitting Diodes (LED) lighting from the SolarOne Learning Center.

Lighting Trends and Resources



With the advent of new lamp types and a better understanding of how light impacts our environment, lighting practices are changing. New considerations include Energy Savings, Global Warming, How Lighting Affects our Vision, Protection of our Dark Sky, Light Uniformity, and our Aging Infrastructure. SolarOne's Solar Powered LED Lighting Systems address these concerns. LED lighting, in concert with our SO-Bright Technology, provides unsurpassed control of the direction, intensity and intervals of lighting and, of course, all of our systems are emission free. As infrastructure begins to fail, SolarOne Systems can help you by-pass the need for re-wiring and paving, installing a low maintenance power plant for years to come.

Dark Sky
Yellow vs White Light

Energy Savings
Uniform Lighting

Global Warming
Aging Infrastructure

Dark Sky

There is growing awareness of the adverse effects of light pollution on dark skies. These effects include:

- Energy waste and the air and water pollution caused by energy waste
- Harm to human health by affecting sleep patterns
- Harm to nocturnal wildlife and ecosystems
- Situations of reduced safety and security due to poor color rendering, glare and non-uniformity
- Reduced visibility at night with glare and non-uniformity
- Poor nighttime ambience and amenity with poor color rendering
- Obscures view of the universe, such as radio frequency interference (RFI) and space debris

A growing number of cities and towns are adopting "Dark Sky" mandates.

To learn more visit The International Dark-Sky Association

Energy Savings

A significant amount of the world's energy is used for lighting. In the U.S. it is estimated that lighting consumes on the order of 25% of our electricity production. At 8% of total lighting market, outdoor lighting constitutes 10-15% of the total lighting load. With dwindling energy reserves and increasing energy costs, campuses, towns, communities are looking for every way to reduce their demand.

Global Warming

Ten Reasons to Consider SolarOne® Solar Powered LED Lighting Systems

- Lighting requirements that are not close to grid connections
- High trenching costs (e.g. ledge, existing pavement, contaminated soil)
- High interconnection costs
- Emergency preparedness (e.g., police stations)
- Aging wiring in need of replacement
- Retrofit to fill in "dark spots"
- Demonstrate your commitment to sustainability to your customers and community
- Minimize disruption in

Related Topics

Photovoltaics/Solar Cell:
LEDs
SolarOne Lighting FAQs
Solar Power Glossary
SO-Bright Technology

Useful Links

How Stuff Works - Solar
Department of Energy -
Kid's Page
The Lighting Research C

Did you know?

Streetlights were often turned off during the full moon? The uniform light of the moon was considered superior to pole lights.

It is estimated that lighting produces 2900 million metric tons of greenhouse gases per year. Interestingly an estimated 98 million metric tons come from fuel-based lighting (e.g. candles, kerosene lamps) in the developing world. Fuel-based lighting is extremely inefficient, producing 5-15% of lumens per watt of incandescent lighting and 1-2% of state-of-the-art LED lighting.

high traffic or retail areas

- Reduce maintenance costs
- Fine tune lighting levels

To view International Association for Energy Efficient Lighting Sources Click Below:

"Global Lighting: 1000 Power Plants" - Evan Mills

"Fuel-based Light: Large CO2 Source" - Evan Mills

White VS Yellow High Pressure Sodium

The Journal of the Illuminating Engineering Society is just one of the sources for references of studies indicating that broader spectrum white lighting from sources such as fluorescent bulbs and white LEDs is much more effective in "dark ambient" conditions than narrow spectrum yellow or orange lighting from such sources as high and low pressure sodium lamps. The studies research such parameters as reaction times and facial recognition. In certain cases, almost three times the lumens are required from a High Pressure Sodium light to achieve the same result from a white light.

Uniform Lighting

Many studies are finding that uniformity of lighting to be more important than light levels for properly lighting outdoor settings. Increasingly local lighting ordinances are incorporating uniformity ratios in addition to the established light levels – usually stated in "foot-candles". It is expected that light levels can be reduced with great uniformity.

Aging Infrastructure

Just like other forms of infrastructure, such as bridges and water mains, electrical distribution networks in many areas across the country are reaching their end of life. The cost of replacing an existing or installing a new buried network is substantial and in many cases prohibitive. Often times the cost is increased because reclamation is required for contaminated soil. Other considerations include the impact of trenching and repaving on retail footsteps and traffic control.

Emergency Preparedness

Recent blackouts across the country have demonstrated that our electric grid is vulnerable to failure, both from mechanical failure and intentional attack. Emergency response organizations with law enforcement, public safety and medical facilities need to take special care that essential services stay on-line.

You can learn more about energy preparedness at the Department of Energy's Office of Electricity Delivery and Energy Reliability



SolarOne Learning Center

[HOME](#)
[PRODUCTS](#)
[APPLICATIONS](#)
[HOW TO BUY](#)
[RESELLER SITE](#)
[NEWS AND E](#)

SolarOne - FAQ

What happens if it is cloudy?
 How many days storage will my system have?
 How many do you recommend?
 How many hours of lighting can I get? Will my lights stay on all night?
 What about snow cover?
 Do I need to wash my panels?
 Do SolarOne Lighting Systems have a Clock or Timer?
 What is LVD and how does it affect my system?
 Can I separate the solar panels from your lighting systems and place them on a roof or in a "solar farm" area?
 Is the system connected to the grid for emergency back up?

What happens if it is cloudy? Solar Cells produce electricity with the diffuse light that is available on overcast days, just not as well. Your system is sized to provide enough energy to ride through periods of low sun and stormy days (based on the history for your location.) SO-Bright™ Technology adds extra protection with run-time extension and LVD features. [Back to Top](#)

How many days storage will my system have? How many days do you recommend? In most cases, SolarOne recommends that lighting systems in the northern part of the US have a minimum of 10 days storage and that those in the south have at least 5 days. Having plenty of battery capacity will help to insure that you get the full potential life out of your batteries, as well as protecting you from a black out. In some cases, where the weather is notoriously stormy and/or sunless in winter, we might recommend even more storage. [Back to Top](#)

How many hours of light can I get? Will my lights stay on all night? The number of hours of lighting that you can expect from your system is dependent on your location (solar resource), the power package you use to collect and store power and the intensity of the light that you require. SolarOne typically sizes systems to provide lighting all night long, using either peak lighting all night or using a combination of peak and off-peak light levels to manage energy and costs more efficiently. In most locations, you can use peak and off-peak lighting and/or a motion detector to ensure that you can provide all night lighting, year round. Your SolarOne representative can recommend a system to meet your performance needs. [Back to Top](#)

What about snow cover? If your panel is covered with snow, SolarOne's intelligent controls will shut your lights off during daylight hours to protect your batteries. Because of the tilt, color and finish of the solar panel, snow cover is likely to clear long before battery storage is depleted. Once again, run-time extension and LVD offer added protection. [Back to Top](#)

Do I need to wash my panels? Solar panels generally need no maintenance at all. [Back to Top](#)

Do SolarOne Lighting Systems have a Clock or Timer? No. SolarOne's intelligent controls track the patterns of energy input and demand manage lighting profiles. This means that you never need to set/or repair a clock. You'll never need to adjust your lights for daylight savings time. [Back to Top](#)

[Find a Representative](#)
[Contact SolarOne®](#)

Related Topics

[SolarOne Learning Cent](#)
[Project Questionnaire](#)
[Harvester FAQs](#)

Stay Current! Click Here to
join our Mailing List.

Ten Reasons to Consider SolarOne® Solar Powered LED Lighting Systems

- ✦ Lighting requirements that are not close to grid connections
- ✦ High trenching costs (e.g. ledge, existing pavement, contaminated soil)
- ✦ High interconnection costs
- ✦ Emergency preparedness (e.g. police station)
- ✦ Aging wiring in need of replacement
- ✦ Retrofit to fill in "dark spots"
- ✦ Demonstrate your commitment to sustainability to your customers and community
- ✦ Minimize disruption in high traffic or retail areas
- ✦ Reduce maintenance costs
- ✦ Fine tune lighting levels

What is LVD and how does it affect my system? LVD stands for Low Voltage Disconnect. SolarOne can set your battery to disconnect if the charge is depleted below our planned minimum. This level is somewhat higher than the battery manufacturer's recommended minimum and creates a reserve. Though it's unlikely you will need to, you can tap into this reserve with a push of a button on your remote control. Your system will remain protected and never go below the manufacturer's recommended minimum charge. [Back to Top](#)

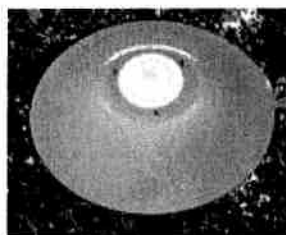
Can I separate the solar panels from your lighting systems and place them on a roof or in a "solar farm" area? This is a "possible" solution, but it is often not very practical. Some of the barriers include: Wire loss (loss of energy to the lights reduces efficiencies), cost of trenching, safety and code issues for higher voltage systems, added costs for mounting or extra poles. A limited number of remote "power stations" can be used to overcome shading issues or difficult to reach areas. SolarOne is happy to review your custom lighting project needs. Design of a system may require a consulting fee. [Back to Top](#)

Is the system connected to the grid for emergency back up? Your SolarOne System is completely autonomous and operates independent of the electric grid. With multiple layers of protection, you can depend on your SolarOne System to keep providing you with bright, white light, even during power outages. [Back to Top](#)

How LED Solid State Lighting Works

SOLID STATE VS TRADITIONAL LIGHT SOURCES

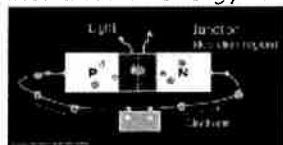
Reference: US Dept of Energy



Light Emitting Diodes – otherwise known as LEDs – differ from traditional light sources in the way they produce light. In an incandescent lamp, a tungsten filament is heated by electric current until it glows or emits light. In a fluorescent lamp, an electric arc excites mercury atoms, which emit ultraviolet (UV) radiation. After striking the phosphor coating on the inside of glass tubes, the UV radiation is converted and emitted as visible light.

Solar Cells and LEDs are diodes made from semi-conductor materials. This is why they are referred to as “solid state” devices. A solar cell relies on the properties of semi-conductor materials such as silicon to convert photons into electricity. Conversely an LED may rely on indium gallium nitride to convert electricity into photons. Both devices are Direct Current (DC) as compared to Alternating Current (AC).

An LED, in contrast, is a semiconductor diode. It consists of a chip of semi-conducting material treated to create a structure called a p-n (positive-negative) junction. When connected to a power source, current flows from the p-side or anode to the n-side, or cathode, but not in the reverse direction. Charge-carriers (electrons and electron holes) flow into the junction from electrodes. When an electron meets a hole, it falls into a lower energy level, and releases energy in the form of a photon (light).



The specific wavelength or color emitted by the LED depends on the materials used to make the diode. Red LEDs are based on aluminum gallium arsenide (AlGaAs). Blue LEDs are made from indium gallium nitride (InGaN) and green from aluminum gallium phosphide (AlGaP). “White” light is created by combining the light from red, green, and blue (RGB) LEDs or by coating a blue LED with yellow phosphor. See “Color Quality” section for more information.

Why Solid State (LED) Lighting?¹

Long Life

LEDs can provide 50,000 hours or more of life, which can reduce maintenance costs. In comparison, an incandescent light bulb lasts approximately 1,000 hours. Fluorescents are rated for 10,000 hours under ideal conditions.

Energy Savings

SolarOne’s LEDs systems provide 70 lumens per watt, compared to 14-20 lumens per watt for halogen or incandescent lighting and 35 to 60 lumens per watt for compact fluorescent lighting. LEDs are especially advantageous for colored lighting applications because filters are not needed.

Related Topics

Photovoltaics/Solar Cell:
Lighting
SolarOne Lighting FAQs
Solar Power Glossary
SO-Bright Technology

Useful Links

How Stuff Works - Solar
Department of Energy -
Kid's Page
The Lighting Research C

Did You Know?

Assuming an average two hour night, you will not ne change your SolarOne LEI for over eleven years!

Better quality light output	LEDs have minimum ultraviolet and infrared radiation.
Intrinsically safe	LED systems are low voltage and are generally cool to the touch.
Smaller flexible light fixtures	The small size of LEDs makes them useful for lighting tight spaces
Durable	LEDs have no filament to break and can withstand vibrations.
Disposal	Fluorescent and mercury vapor lighting contain mercury, which is hazardous to the environment and must be disposed of properly. LED's don't contain mercury and are not considered hazardous waste.

LED lighting systems have already proved to be very effective in indicator applications where brightness, visibility and long-life are important, such as in exit signs and traffic signals. New uses for LEDs in the general illumination market include small-area lighting, such as parking lots and pathway and step marking. As white LEDs become more powerful and effective, LEDs will be used in more general illumination applications.

1) From Lighting Research Center at Rensselaer Polytechnic Institute

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[Privacy Policy](#) [S](#)

5. WHITMAN COUNTY HUMANE SOCIETY REQUEST

STAFF REPORT_____

QUESTIONS FROM COUNCIL ON STAFF REPORT_____

DISCUSSION_____

ACTION TAKEN_____

NOTES:



CITY OF PULLMAN

Administration/Finance


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MEMORANDUM

TO: Mayor and City Council

FROM:  John Sherman, City Supervisor

RE: Request from Whitman County Humane Society for Contract Amendment

DATE: July 2, 2009

We have received the attached letter of request from the Whitman County Humane Society (WCHS) regarding their contract with the city of Pullman. The current contract expires on July 31, 2009. WCHS is requesting that the current contract be renewed through December 31, 2009. The requested amount of monthly payment requested by WCHS for the remainder of 2009 is \$3,000. This is the same monthly compensation that has been paid by the city to WCHS from January 2001 until the present time. The city paid WCHS \$4,000 per month from July 2000 through December 2000. For 2010, WCHS is requesting that the city increase its payment to \$4,500 per month. The rationale for requesting the increased funding is set forth in the letter from WCHS as follows:

Effective January 1, 2010 and for the calendar year 2010, WCHS requests an increase in the current monthly support fee of \$3,000.00 to a monthly support fee of \$4,500.00. Since the inception of the partnership between WCHS and the City of Pullman in 2000, the support fee of \$3,000 per month to shelter, care for, and offer adoption services has not been increased, despite cost of living increases for materials, services and wages, and new services such as spay/neuter assistance for Whitman County residents who need financial help to alter their pets.

The average annual cost of living increase for the past 9 years, based on Social Security CA calculations, is 3.1%. On a cost of living basis, the annual support fee from the city should be \$4,052 in 2009 and \$4,178 in 2010. It should be noted that once the WCHS shelter is at the new facility, the city will not bear any costs for utilities, water, sewer, garbage, and telephone that it now pays.

This is a discussion item so we would like to request your direction on how to proceed. If you concur, we will bring the expiring 2009 contract back before you at the requested current

level of funding of \$3,000 per month through December. The contract would be presented for adoption at the City Council meeting on July 21.

With respect to the request for the year 2010 contract, we would request your direction as to whether you would prefer to have the WCHS make a presentation to you at the City Council meeting on July 21, or if you would prefer to defer action on this request until the 2010 pre-budget workshop later this year.



July 1, 2009

Glenn Johnson, Mayor
John Sherman, City Supervisor
Pullman City Council

Re: Fee Increase to Support Animal Shelter and Adoption Services, Contract # _____

For the past nine years, the City of Pullman and the Whitman County Humane Society (WCHS) have been partners in the shared responsibility of animal control and the humane treatment of stray animals in the city. Prior to the spring of 2000, these costs and responsibilities were the exclusive responsibility of the City of Pullman, operated through the Police Department for Code Enforcement. Following the spring 2000, the WCHS assumed responsibilities for the daily operations of the shelter, including bearing the costs associated with shelter staffing and animal care. The city contract that has helped to offset these costs has not been re-evaluated since that time.

The current contract between the City of Pullman and the Whitman County Humane Society expires July 31, 2009. WCHS is building a new shelter to allow WCHS to vacate the current shelter on City property, as requested by the City. The new facility, called AnimalHaven, will be ready for occupancy in late October, 2009. Accordingly, WCHS requests that the current contract be renewed under the current terms through December 31, 2009.

Effective January 1, 2010 and for the calendar year 2010, WCHS requests an increase in the current monthly support fee of \$3,000.00 to a monthly support fee of \$4,500.00. Since the inception of the partnership between WCHS and the City of Pullman in 2000, the support fee of \$3,000 per month to shelter, care for, and offer adoption services has not been increased, despite cost of living increases for materials, services and wages, and new services such as spay/neuter assistance for Whitman County residents who need financial help to alter their pets.

The average annual cost of living increase for the past 9 years, based on Social Security COLA calculations, is 3.1%. On a cost of living basis, the annual support fee from the city should be \$4,052 in 2009 and \$4,178 in 2010. It should be noted that once the WCHS shelter is at the new facility, the city will not bear any costs for utilities, water, sewer, garbage, and telephone that it now pays.

City government funding of animal control and shelter operations is common. The support allows cities to contribute at a reasonable rate to the cost of shelter services while benefitting from the non-profit shouldering the responsibility for the lion's share of operating expenses.

Officials of WCHS would be pleased to make a presentation to the City Council on this request as appropriate. The working relationship between WCHS and the City of Pullman is strong, and the shared responsibility of animal control and humane treatment of companion animals is working well. All City officials have been as accommodating as possible during this transition. Thank you for your consideration, and please advise on next steps.

Sincerely,

Becky J. Bitter, President
Whitman County Humane Society, Inc.
Board of Directors