

To view City Council's
2016/2017 Strategic Priorities
and
Individual Priorities,

please visit our website at

cityofpage.org/government/councilpriorities

or stop in at the City Clerk's Office in City Hall for a copy.

Thank you

**PAGE CITY COUNCIL
SPECIAL MEETING MINUTES
FEBRUARY 3, 2016**

A Special Meeting of the Page City Council was held at 5:30 p.m. on February 3, 2016, in the Council Chambers at City Hall in Page, Arizona. Mayor Bill Diak presided. Vice Mayor John Kocjan, Councilors Mike Bryan, Scott Sadler, Levi Tappan, and Korey Seyler were present. Councilor Dennis Warner was excused. There was a moment of meditation. Mayor Diak led the Pledge of Allegiance.

Mayor Diak called the meeting to order.

Staff members present: Human Resource Administrator, Kay Eddlemon; Police Chief Frank Balkcom; and City Clerk, Kim Larson.

EXECUTIVE SESSION

Pursuant to ARS § 38-431.03 (A) (1) Discussion or consideration of employment, assignment, appointment, promotion, demotion, dismissal, salaries, disciplining or resignation of a public officer, appointee or employee of any public body, except that, with the exception of salary discussions, an officer, appointee or employee may demand that such discussion or consideration occur at a public meeting. The public body shall provide the officer, appointee or employee with such notice of the executive session as is appropriate but not less than twenty-four hours for the officer, appointee or employee to determine whether such discussion or consideration should occur at a public meeting.

City Attorney Applicant: Joshua Smith

Motion made by Councilor Sadler to enter into Executive Session at 5:34 p.m. The motion was duly seconded and passed upon a vote.

Mayor Diak reconvened the Regular City Council Meeting at 6:38 p.m.

Discussion and possible action by the City Council pertaining to a City Attorney

Motion made by Vice Mayor Kocjan to direct staff to make arrangements for a face-to-face interview with Joshua Smith. The motion was duly seconded and passed upon a vote.

ADJOURN

The meeting was adjourned at 6:39 p.m.

Kim L. Larson
City Clerk

William R. Diak
Mayor

Page City Council Special Meeting-February 3, 2016

CERTIFICATION

I hereby certify that the foregoing minutes are a true and correct copy of the minutes of the Special City Council Regular Meeting, held on the 3rd day of February, 2016. I further certify that the meeting was duly called and held and that a quorum was present.

Dated this 24th day of February, 2016

Kim Larson, City Clerk

**PAGE CITY COUNCIL
REGULAR MEETING MINUTES
FEBRUARY 10, 2016**

A Regular Meeting of the Page City Council was held at 6:30 p.m. on February 10, 2016, in the Council Chambers at City Hall in Page, Arizona. Vice Mayor John Kocjan presided. Councilors Mike Bryan, Scott Sadler, Levi Tappan, and Korey Seyler were present. Mayor William Diak and Councilor Dennis Warner were excused. There was a moment of meditation. City Clerk Kim Larson led the Pledge of Allegiance.

Vice Mayor Kocjan called the meeting to order.

Staff members present: City Manager, J. Crystal Dyches; City Attorney, Joe Estes; IT Director, Mike Bergner; Finance Director, Linda Watson; Community Development Director, Kim Johnson, Police Lieutenant, Tim Lange; Deputy City Clerk, Sue Kennedy; and City Clerk, Kim Larson.

PRIORITY LIST

Discussion and possible action by the City Council pertaining to the City Council Strategic Priorities

There was no discussion by the City Council.

Discussion and possible action by the City Council pertaining to the City Councilors individual priorities

There was no discussion by the City Council.

MINUTES

Work Session Meeting – December 16, 2015

Work Session Meeting – January 27, 2016

Regular City Council Meeting – January 27, 2016

Motion made by Councilor Sadler to approve the minutes. The motion was duly seconded and passed upon a vote.

CONSENT AGENDA

MINUTES

Page Volunteer Firefighter Pension Board–January 14, 2015

Airport Advisory Board–August 10, 2015

Airport Advisory Board–October 12, 2015

Community Development Advisory Board–December 15, 2015

INFORMATION

City of Page Monthly Cash Allocation Variance Report

Motion made by Councilor Sadler to approve the consent agenda. The motion was duly seconded and passed upon a vote.

Page City Council Regular Meeting- February 10, 2016

PUBLIC HEARINGS

None

HEAR FROM THE CITIZENS

Karen Dallett, 312 Myrtle Drive, Executive Director of the Glen Canyon Natural History Association came before City Council to ask the Council to consider a mandate to procure midlevel rental housing for the expanding job market in Page. She stated concerns for the lack of affordable housing for employees to reside, and provided a letter addressed to the City Council (attached hereto and by this reference made a part of herein).

Steve Blevins, 327 Aero, stated concerns regarding citizens not being appointed to the six vacant positions on Boards and Commissions when an application is on file.

UNFINISHED BUSINESS

None scheduled

NEW BUSINESS

Discussion and possible action by the City Council pertaining to the purchase of a 2016 Chevy Tahoe 4WD for the Police Department

The Page Police Department came before City Council to request permission to purchase a 2016 Chevy Tahoe 4WD with Police Equipment and Police Package from Midway Chevrolet Nissan Isuzu. Midway Chevrolet has a contract with the State of Arizona for purchasing, State of Arizona Vehicle contract #ADSPO12-016669.

Lieutenant Tim Lange introduced Sergeant Sam Myers to present the agenda item.

Sergeant Sam Myers presented the agenda item.

There was discussion.

Motion made by Councilor Bryan to authorize the Page Police Department permission to purchase one (1) 2016 Chevy Tahoe 4WD with Police Equipment and Police Package from Midway Chevrolet Nissan Isuzu. The motion was duly seconded and passed upon a vote.

Discussion and possible action by the City Council pertaining to accepting a 2006 Ford F150 seized vehicle from Northern Arizona Street Crimes Task Force

The Police Department came before City Council to request authorization to accept a 2006 Ford F150, seized vehicle, from the Northern Arizona Street Crimes Task Force (METRO). The truck will be used for law enforcement for the Page Police Department.

Lieutenant Tim Lange, introduced the agenda item. He said that the vehicle is in excellent condition, has approximately 90,000 miles and a Blue Book value of

Page City Council Regular Meeting- February 10, 2016

\$13,000.00. The vehicle will be used as a utility vehicle for hauling trash and range-type work.

Motion made by Councilor Tappan to accept delivery of a 2006 Ford F150, seized vehicle, from the Northern Arizona Street Crimes Task Force (METRO), to be used for Law Enforcement purposes by the Page Police Department. The motion was duly seconded and passed upon a vote.

Discussion and possible action by the City Council pertaining to retaining Hinton Burdick PLLC for auditing services for FY2016

In April 2012, the City submitted a Request for Proposal (RFP) for auditing services for the City of Page. After following the bid procedures, the City Council awarded the auditing services contract to Hinton, Burdick, PLLC. This firm has completed the annual audit since this award in 2012.

Each year the auditing firm presents an engagement letter that outlines the specifications and cost projections of the upcoming audit.

Staff was seeking Council's approval for retaining Hinton, Burdick PLLC to conduct the fiscal year audit for 2016.

City Manager Crystal Dyches introduced the agenda item.

There was discussion.

Motion made by Councilor Sadler to retain Hinton, Burdick PLLC to complete the professional auditing services for fiscal year 2016. The motion was duly seconded and passed upon a vote.

BID AWARDS

None scheduled

BUSINESS FROM THE MAYOR

None scheduled

BUSINESS FROM THE MANAGER

None scheduled

Vice Mayor Kocjan moved the following agenda items to this portion of the agenda.

BUSINESS FROM THE COUNCIL

Discussion and possible action by the City Council pertaining to the sewer rates

Vice Mayor Kocjan stated that he would like to table the agenda until the next meeting when all of the Council Members are present. There was no objection by City Council.

Page City Council Regular Meeting- February 10, 2016

Vice Mayor Kocjan made a motion to table the agenda item. The motion was duly seconded and passed upon a vote.

Discussion and possible action by the City Council pertaining to the bond debt fee on utility statements

Councilor Tappan referred to Ordinance 616-14, stating that since 85% of one percent (1%) tax was being applied toward the bond debt, the citizens are being charged twice by also having to pay the bond debt fee on the utility statement.

Vice Mayor Kocjan stated that paying off the bond debt was based on certain scenarios, and until the City was sure that the funds are available to pay in full the bond payment no changes should be made at this time.

There was discussion.

The consensus of the City Council was to schedule a work session for further discussion.

Discussion and possible action by the City Council pertaining to Planning and Zoning hotel height

Councilor Tappan stated concerns pertaining to the new hotels being four stories and brought this before City Council to have discussion. He stated that builders are coming in with building plans are being approved because the City does not have zoning code limits, and the Page Fire Department is okay with up to four stories. Due to the time it will take the City to update the Zoning Code, six to eight months, Councilor Tappan wanted to know if Council was interested in limiting the buildings to three stories at this time.

Community Development Director Kim Johnson stated that the City of Page has a unique situation, in that quite a lot of the City property is zoned Planned Development, which was really intended to be an overlay district. Technically the City does not have a Planned Development District designation in the Zoning Code, and therefore the City does not have any standards in that district. There are some height restrictions in the Central Business District, C2 District, and Service Commercial District of 30", however that can be modified with a Conditional Use Permit, and there is no limitation on that height. The Planning and Zoning Department has reviewed the plans and have deferred to the Fire Department for the maximum height, which is four stories. The City currently has a Request for Proposal to update the City Code and this will be addressed when the City Code is updated.

There was discussion only.

Discussion by the City Council pertaining to security in the Council Chambers

Councilor Tappan made a statement that since he has been on City Council, he has

Page City Council Regular Meeting- February 10, 2016

never felt threatened in the Council Chambers and wanted to know if there was a threat or something he did not know about. He stated that at the last meeting there were extra police and wanted to know the reason.

City Manager Crystal Dyches stated that there were officers present in support of the Police Annual Update, and the reason for two plain clothed officers being present was due to a citizen who threatened to make trouble, not physical harm, at the meeting.

There was discussion only.

BOARDS & COMMISSIONS

Discussion by the City Council pertaining to reports by Board Liaisons

Vice Mayor Kocjan, Page Utility Enterprises (PUE) Board, stated that there was discussion pertaining to the sewer rate, and that PUE would like to phase in a sewer rate increase over a two year period, and reduce the electric rate by 3.2%. A rate hearing would be required for the increase in sewer and decrease in electric. The PUE Board would like to have the new rates effective July 1, 2016 with the new budget.

Discussion and possible action by the City Council pertaining to a Board Appointment for the Airport Advisory Board

There are two vacancies on the Page Airport Board. An application for the Page Airport Board was received from Joshua Enevoldson.

Motion made by Councilor Sadler to appoint Joshua Enevoldson to the Page Airport Board with a term ending June 2017. The motion was duly seconded and passed upon a vote.

Councilor Bryan asked what the process was to fill board vacancies.

City Manager Crystal Dyches referred the question to City Clerk Kim Larson.

City Clerk Kim Larson stated that the board vacancies are listed on the City of Page website and in May of each year an ad is placed in the local newspaper listing the vacancies that will occur at the end of June, when the terms expire. She stated that board applications are accepted anytime during the year. The applications are kept on file until there is an opening on the board that was selected, at which time the board appointment and application are brought before City Council. She stated that she will have to check her records to see if there are any applications that have not been brought before City Council when there was a vacancy on a board with an interested applicant, and that she was not aware of any.

Mr. Blevins stated that he had an application on file and understood that if the board he chose to serve on did not have a vacancy, that he would be asked to serve on any board that had a vacancy.

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Vice Mayor Kocjan stated that when there is a vacancy, only the applications that selected that particular board were brought before City Council to be appointed.

Steve Blevins asked the City Clerk Kim Larson to check all of the boards on his application.

There was discussion.

DEPARTMENTS

None scheduled

CLAIMS

None scheduled

BUSINESS FROM THE CITY ATTORNEY

EXECUTIVE SESSION

Pursuant to A.R.S. § 38-431.03 (A)(3) and (4) Discussion or consultation for legal advice with the attorney or attorneys of the public body

Professional Services Agreement for the Management, Operation and Maintenance of the Lake Powell National Golf Course with ARAMARK

EXECUTIVE SESSION

Pursuant to ARS § 38-431.03 (A)(1) Discussion or consideration of employment, assignment, appointment, promotion, demotion, dismissal, salaries, disciplining or resignation of a public officer, appointee or employee of any public body, except that, with the exception of salary discussions, an officer, appointee or employee may demand that such discussion or consideration occur at a public meeting. The public body shall provide the officer, appointee or employee with such notice of the executive session as is appropriate but not less than twenty-four hours for the officer, appointee or employee to determine whether such discussion or consideration should occur at a public meeting

Contract for legal services with Joseph D. Estes

Motion made by Councilor Bryan to enter into Executive Session for both Executive Sessions at 7:14 p.m. The motion was duly seconded and passed upon a vote.

Vice Mayor Kocjan reconvened the Regular City Council Meeting at 7:40 p.m.

Discussion and possible action by the City Council pertaining to the Professional Services Agreement for the Management, Operation and Maintenance of the Lake Powell National Golf Course with ARAMARK

Councilor Tappan made a motion to have staff prepare an addendum to the Professional Services Agreement to cover ARAMARK's use of the of the City's Liquor License. The motion was duly seconded and passed upon a vote.

Page City Council Regular Meeting- February 10, 2016

Discussion and possible action by the City Council pertaining to a contract for legal services with Joseph D. Estes

There was no discussion by the City Council.

ADJOURN

The meeting was adjourned at 7:41 p.m.

Kim L. Larson
City Clerk

William R. Diak
Mayor

CERTIFICATION

I hereby certify that the foregoing minutes are a true and correct copy of the minutes of the City Council Regular Meeting, held on the 10th day of February, 2016. I further certify that the meeting was duly called and held and that a quorum was present.

Dated this 24th day of February, 2016

Kim Larson, City Clerk

**AIRPORT ADVISORY BOARD
REGULAR MEETING MINUTES
DECEMBER 14, 2015**

A Regular Meeting of the Airport Advisory Board was held at 5:35 p.m. on December 14, 2015, in the Page City Council Chambers, Page, Arizona. Chair Dave Simmons, Members, Ronald Macdonald, Leroy Wicklund, Clifford Biggs, and Christopher Large were present. Member James Hunt and City Council Liaison Dugan Warner were absent.

Staff Members present: Airport Director, Rick Olson.

Member Leroy Wicklund called the meeting to order.

MINUTES

Regular Airport Board Meeting-October 12, 2015

A motion was made by Member Macdonald to approve the minutes and they passed upon a unanimous vote.

HEAR FROM THE CITIZENS

No citizens addressed the Airport Advisory Board

UNFINISHED BUSINESS

None scheduled

NEW BUSINESS

Discussion and possible action by the Board pertaining to a presentation by the Canyon Club for an Airport Observation Area

Brian Price, representing the Canyon Club, addressed the Board. Mr. Price explained that the Canyon Club is a civic club dedicated to making improvements in the City of Page. Their next proposed project is an observation area at the Page Municipal Airport to promote aviation education. The proposal was as follows:

- The Canyon Club requests the funds from the City of Page to help move the perimeter fence
- The Canyon Club will build an area close to the taxiway/runway to watch aircraft
- The Canyon Club will install a radio and sound system to allow the public to listen to communication over the Unicom
- The Canyon Club will install shades and seating for the public
- The Canyon Club will install aviation related play equipment for the children
- The Canyon Club will install an interpretive sign for education verbiage about the airport and operations
- The Canyon Club will build a parking area for the public
- The Canyon Club will fund the entire project and ask for Public Works to take over the minimal maintenance

Motion made by Member Biggs to have more detailed information from the Canyon Club for the viewing area, and that the Board has no objection to the project. Member Large seconded the motion and it passed upon a unanimous vote.

Discussion and possible action by the Board pertaining to electing a new vice-chairman
Motion by Member Wicklund to nominate Clifford Biggs as the new vice-chairman.
Member Large seconded the motion and it passed upon a unanimous vote.

Discussion by the Board pertaining to the AVIS Lease Agreement expiring January 31, 2016

Airport Director Rick Olson gave a brief history of the AVIS Lease. Five years ago there were three car rental companies at the Page Airport and to be competitive, Lake Powell Car Company (AVIS) submitted a high proposal. Now AVIS is the only car rental company left at the airport and the airport would like to keep his business. The City of Page will advertise a RFP, but it will limit the counter space to a car rental company only.

Discussion by the Board pertaining to the 7-25 Runway Project

Airport Director Rick Olson informed the Board the runway project is complete, however, since the project was finished so late in the year the asphalt did not pass the specifications for our engineering firm. The contractor and our engineering firm have come to a solution. The contractor will return when the weather is warm and put a seal coat over the taxiway to give it a life span of 10-15 years. The Board agreed this would be acceptable.

Discussion and possible action by the Board pertaining to new hangar construction by Dave Taylor

Dave Taylor has applied for a building permit to construct a new hangar. The plans were sent to our engineer and have been approved for airport construction. The permit has also been sent to the FAA for their information.

Member Large made a motion to approve the construction of the hangar. Member Macdonald seconded the motion and it passed upon a unanimous vote.

GREAT LAKES AIRLINES MONTHLY UPDATE

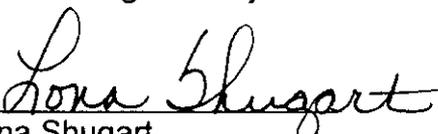
Discussion by the Board pertaining to the cancelled, NOOP's and delays for December
Great Lakes has improved their service with no delays or cancellations for the month of December.

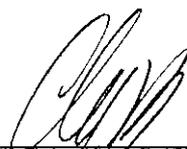
Discussion by the Board pertaining to the letter of support of Great Lakes petition for exemption

This is an information item only. The letter of exemption was approved by the City Council and signed by the Mayor.

ADJOURN

The meeting was adjourned at 6:28 p.m.


Lona Shugart
Airport Administrator

 
Dave Simmons
Chairman

**PAGE PLANNING AND ZONING COMMISSION
REGULAR MEETING MINUTES
JANUARY 5, 2016**

A Regular Meeting of the Page Planning and Zoning Commission was held at 5:30 p.m. on January 5, 2016, in the Council Chambers at City Hall in Page, Arizona. Chair Leroy Wicklund presided. Commissioners, R. B. Ward, Rob Peterson, Bubba Ketchersid, John Mayes and Shelley Johnstone were present. Vice Chair Bill Justice was excused. City Council Liaison, Scott Sadler was excused.

Chair Leroy Wicklund called the meeting to order at 5:30 p.m.

Staff members present: Planning and Zoning Director, Robin Crowther and Community Development Director Kim Johnson.

MINUTES

Regular Planning and Zoning Commission Meeting-December 1, 2015

Motion made by Commissioner R.B. Ward to approve the minutes. The motion was duly seconded by Commissioner Rob Peterson and passed upon a unanimous vote.

COMMUNICATIONS

None

HEAR FROM THE CITIZENS

None

PUBLIC HEARING

None

UNFINISHED BUSINESS

- A. Discussion and possible action regarding Zoning Ordinance update.

Kim Johnson gave an update that the RFP's had been sent out in December and the deadline to submit them is January 21, 2016. Volunteers for a subcommittee to review RFP's individually are Commissioner Rob Peterson, R.B. Ward, John Mayes and Shelley Johnstone.

Commissioner Rob Peterson asked about the Zoning Ordinance update and lighting update and if the Commission updates lighting now would they have to do it again during the Ordinance update. Kim Johnson said that depends on the update that is done sooner and City Council.

- B. Discussion and possible action regarding Hotel Parking Requirements.

There was no discussion.

- C. Discussion and possible action regarding Vacation Home Rental on-site parking.

There was no discussion.

NEW BUSINESS

Planning and Zoning Regular Meeting-January 5, 2016

- A. Discussion and possible action regarding a Conditional Use Permit for a Lot Combination (CUP 16-1.1) Bubba Ketchersid.

Commissioner Bubba Ketchersid recused himself and left the dais.

Robin Crowther reviewed the request for the CUP.

Motion made by Commissioner R.B. Ward to approve CUP 16-1.1. The motion was duly seconded by Commissioner John Mayes and passed upon a vote.

Commissioner Bubba Ketchersid returned to the dais.

- B. Discussion regarding Lighting.

Commissioner Rob Peterson gave a presentation on "The Impact of Blue-Rich LEDs on Light Pollution. (Attached hereto and by this reference made a part of herein) His proposal is to strike out ~~sodium pressure lighting~~ and replace with, and have a CCT of 2700K or less for LED lighting, and to have this applicable to street lights in the ordinance.

Commissioner John Mayes inquired as to how we would fix all lighting. Commissioner Rob Peterson suggested a sunset clause that all non conforming lighting be made to conform in 3-5 years. Commissioner Bubba Ketchersid suggested we have a dark sky ordinance and conform in less than 5 years.

Bryan Hill, 231 Morgan talked about lighting and said there were examples of 3 different LED street lights in the City Hall parking lot. When walking out the doors by the Council Chambers the light to the left is an LED light 2700K (at a cost of approx. \$1000), straight ahead is an LED light 4000K (at a cost of approx. \$400), and to the right is an LED 5000K (at a cost of approx. \$400).

Kim Johnson stated that street lighting would have to be specifically addressed in the ordinance. The Commission needs to decide what they want on a Public Hearing at the next meeting.

Art Cloutier, 115 S. Hawk, stated that in the past 2 years the skies over Page have more light pollution and it needs to be addressed.

Christie Admiral, 364 Ironwood, a representative from the National Park Service is pleased that Page is recognizing a need for dark skies.

Karen Delett, 321 Myrtle, from the National History Association agrees that we need to have strict rules on lighting soon. She stated that tourists like night sky events.

Planning and Zoning Regular Meeting-January 5, 2016

ADJOURN

Motion made by Commissioner R.B. Ward to adjourn the meeting at 6:48 p.m. The motion was duly seconded by Commissioner John Mayes and passed upon a unanimous vote.

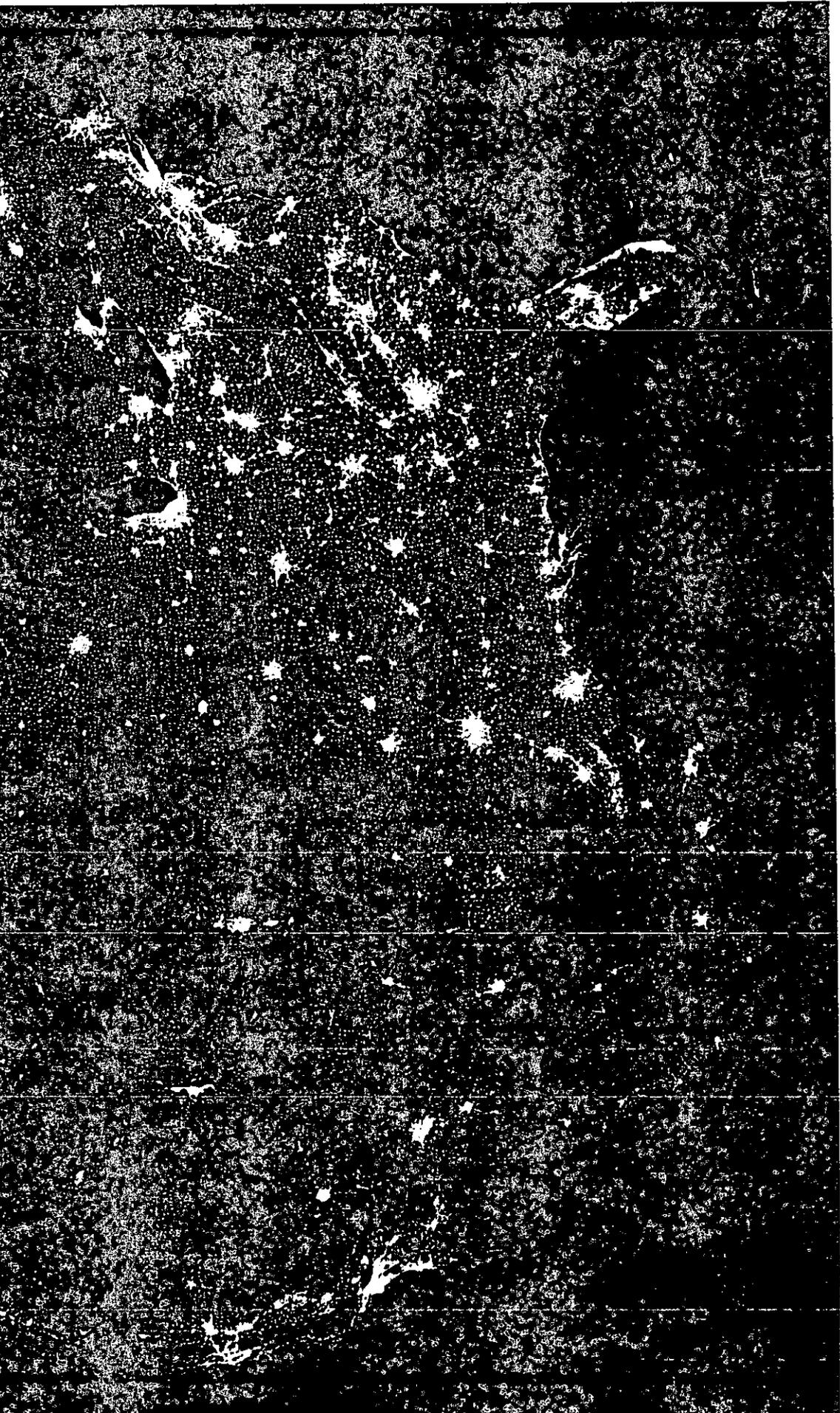


Robin Crowther
Planning and Zoning Director



Leroy Wicklund
Chair

The Impact of Blue-Rich LEDs on Light Pollution





Presentation Outline

- Introduction
- Causes of Light Pollution
- Properties of Blue-Rich LEDs
- Ways to Mitigate Light Pollution
- Ordinance Language
- Conclusion

Introduction

- Outdoor Lighting can be a win-win for everyone
 - Security, Safety and Dark Skies
 - Direct the light where it needs to be
- LED lighting technology
 - Technology is in its infancy
 - New and improved fixtures will be developed soon

Introduction

- High Pressure Sodium lighting is a mature technology
 - Electricity use is slightly less than LED
 - There are good and bad fixtures available
 - Last $\frac{1}{2}$ as long as LED
- HPS lamps contain a little bit of mercury
 - Cost is \$0.95 per lamp to recycle
 - Takes a truck load of HPS lamps to get a pinch of mercury

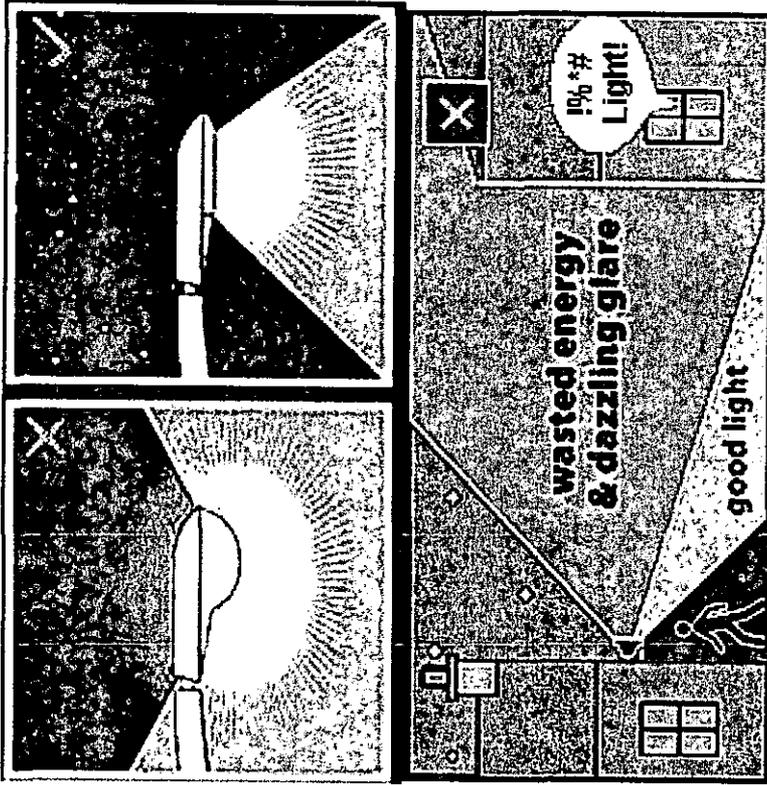
Causes of Light Pollution

- Upward directed light.
- Spectrum of lamp source.
 - Blue light scatters in the atmosphere
 - The sky is blue
 - Amber light does not scatter
 - Sunsets are amber (same as sodium vapor lighting)
- Excessive illumination of surfaces.

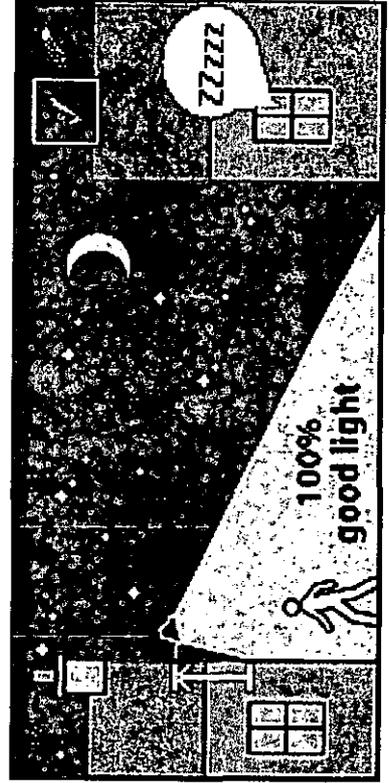
Three Components of Light Pollution

- Sky Glow
- Light Trespass
- Disability Glare
 - Recognized by the AMA as a medical health risk.
 - Decreases visual acuity and decreases reaction time.
 - To minimize discomfort and disability glare for lighting, use only luminaries in which there is no view of the light source, either directly or as a reflected image, from common lines of sight.

Good vs Bad Lighting



BADLY AIMED 500W HALOGEN FLOODLIGHT



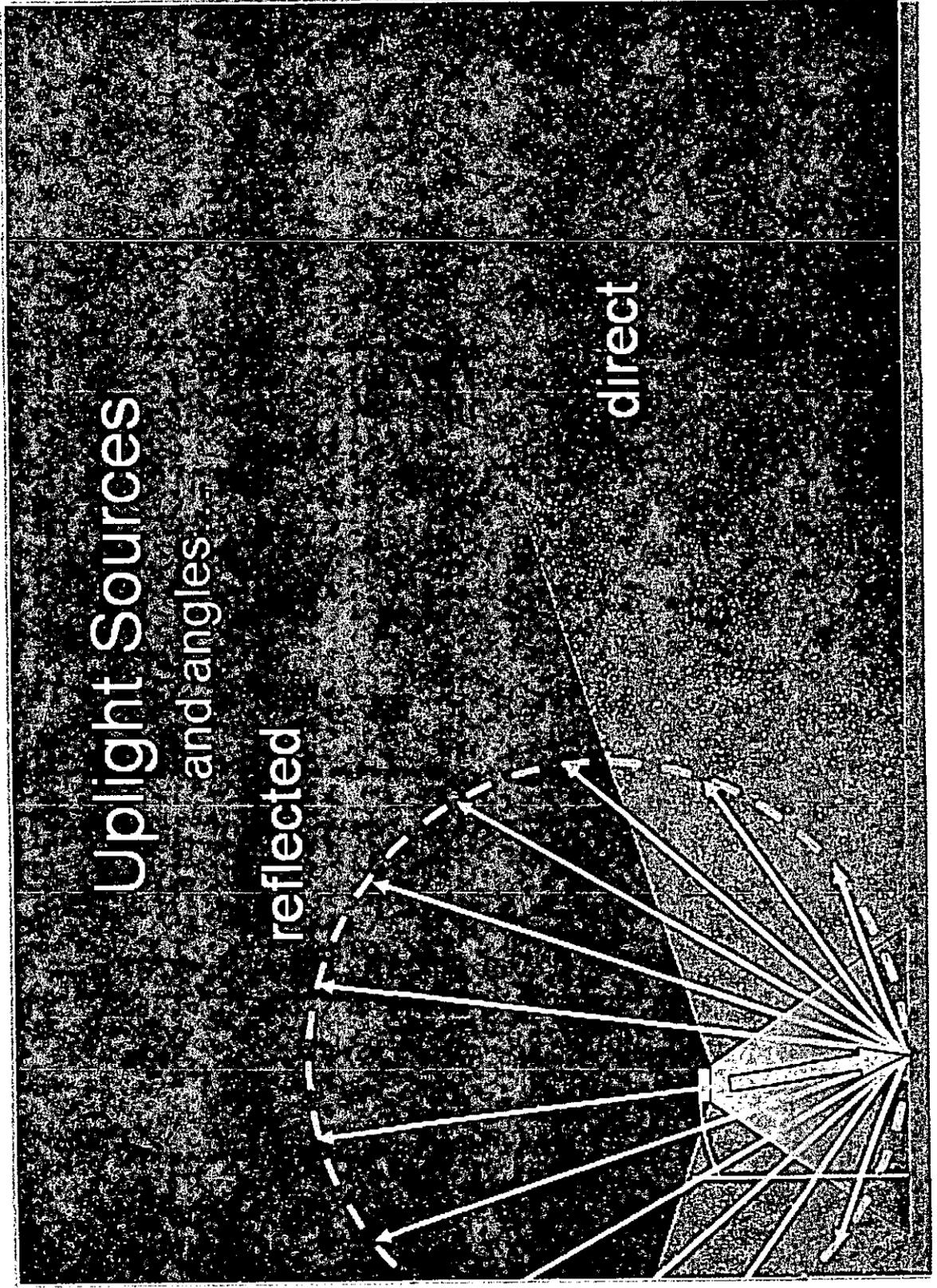
WELL AIMED 100W FLOODLIGHT

Impact of Street Lamp Spectra *

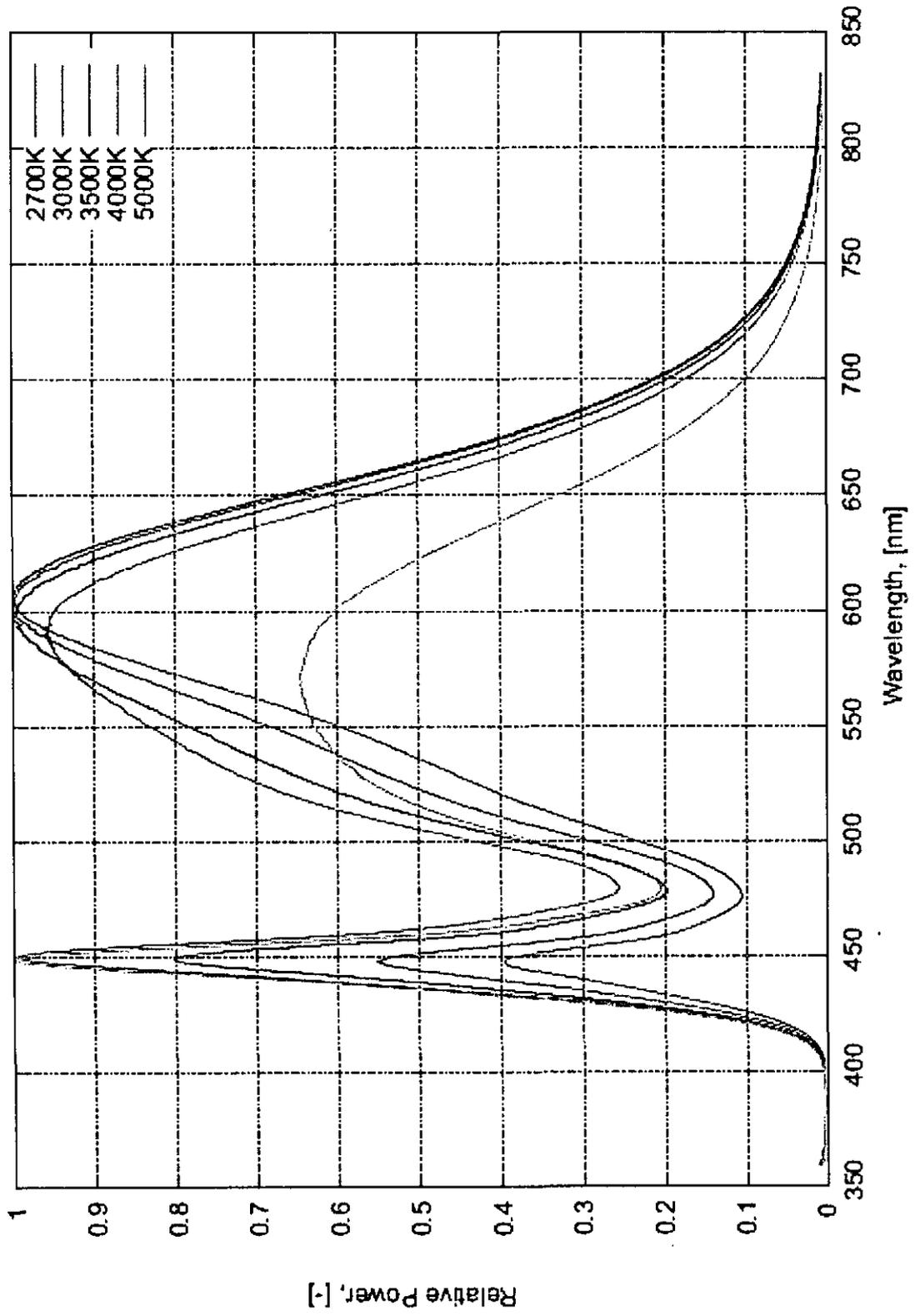
Type	Description	Sky Glow (relative to HPS)	Sky Glow (relative to HPS)
LPS	Two recently published studies (Luginbuhl et al. 2014; Aube et al. 2013) have evaluated the visible sky glow brightness caused by the following lamp types: Low-pressure sodium – a nearly monochromatic yellow-orange light source used mostly in areas near astronomical observatories and sea turtle nesting beaches.	1.0	0.4
HPS	High-pressure sodium – A golden-yellow light source widely used throughout the world.	2.4	1.0
FLED	Filtered light-emitting diode – a spray-yellow LED lamp with a filter that removes most emission with wavelength shorter than 500 nanometers. Used on the Island of Hawaii.	3.6	1.5
LED	Light-emitting diode with correlated color temperature (CCT) of 300K – a warm-white LED. This type of LED has not seen wide use.	4.5	1.8
LED	Light-emitting diode with CCT of 4100K – a cool-white LED. This is a common LED type in recent LED area lighting installations.	6.4	2.7
LED	Light-emitting diode with CCT of 5100K – a cool-white LED. This also is a common LED type in recent LED area lighting installations.	7.9	3.3

* <http://www.flagstaffdarkskies.org/for-wonks/lamp-spectrum-light-pollution/>

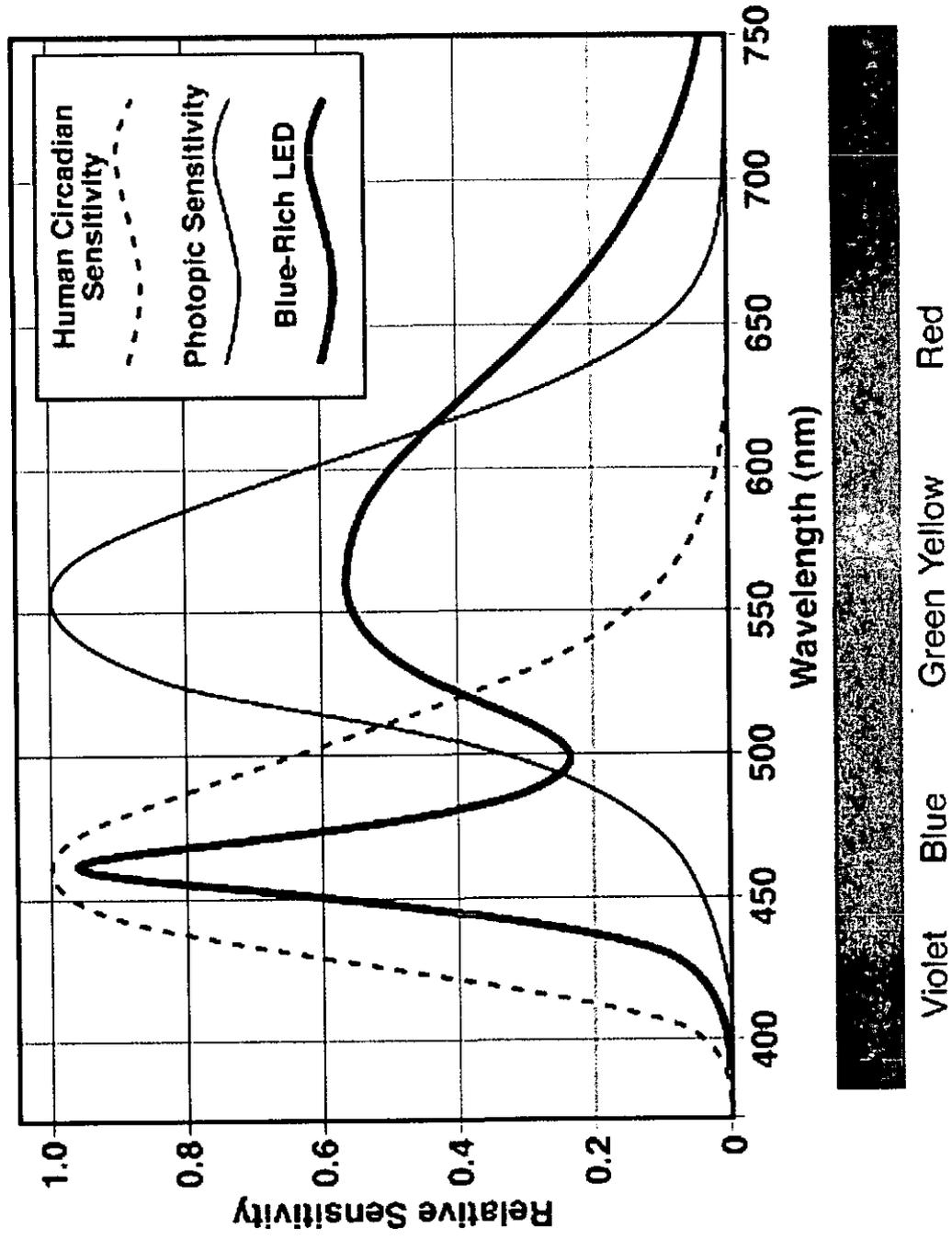
Light Scatter from Surfaces



White Light LED Spectral Distribution



Eye Sensitivity to Blue-Rich LED*



*" Visibility, Environmental, and Astronomical Issues Associated with Blue-Rich White Outdoor Lighting," International Dark-Sky Association, 4 May 2010.

Luminaire Contribution to Sky Glow*

Light Source	Efficiency (Lumens/watt)	% of Light Emitted Below 500nm	Color Rendering Index
High Pressure Sodium	70-140	17.3	20-25
Low Pressure Sodium	100-200	0	0
Fluorescent	46-104	21.8	90+
Incandescent	8-17	10.7	100
Tungsten Halogen	14-24	8.5	95-100
Metal Halide	78-120	20	60-70
White LED	75-107	30	70-90+
Filtered White LED	41-75	9.5	55
Narrow Band Amber LED	25-51	0	0

Figure 4. Table of values featuring Lumens per watt (compiled from catalogues), color rendering index, and percentage of light emitted below 500nm for various light sources.

- "LEDs: The Future of Street Lighting and their Effect on Astronomy," B.N. Delp, Pompea, S.M., Aug. 2012

Benefits of Lower LED CCT

- LEDs at and below 3000 K correlated color temperature produce*:
 - More pleasing light than LEDs of higher CCT.
 - Less glare.
 - Less potential light pollution.
 - Still a source of light scatter ($\lambda \leq 500$ nm).

* <https://www.darksky.org/ida-fixture-seal-of-approval/about-fsa>

Ways to Mitigate Light Pollution

- Use LEDs of the lowest possible CCT, while maintaining public safety.
- Employ luminaires that minimize glare.
- Use the right amount of light. Don't over-illuminate.
- Direct the light to the ground only where it is needed.
- Reduce street light illumination levels, where possible, after a cut-off point in the evening.

Ordinance Language

- Use only amber narrow-band LEDs for street lights.
- Street lights must have a CCT of 2700 °K or less.
- Street light fixtures (luminaries) must be shielded to produce a light cone that directs the light to the street and not onto adjacent buildings

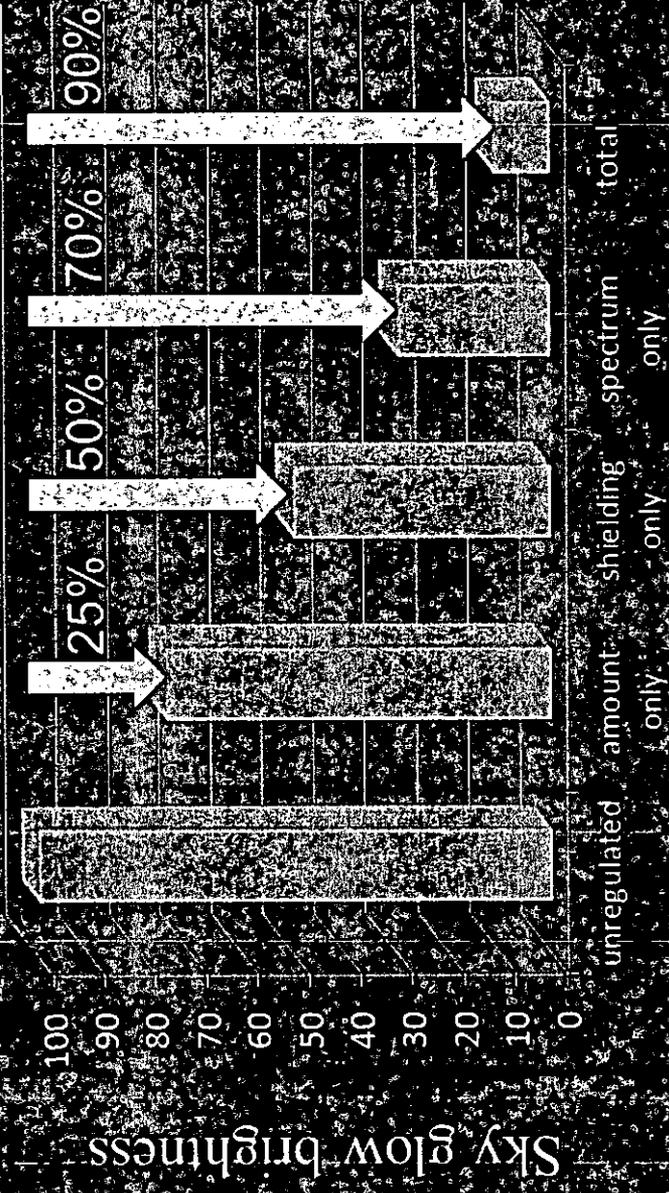
Conclusion

- The transition to blue-rich LEDs may increase light pollution.
- Choose an LED of lowest possible CCT while maintaining public safety, preferably 2700 K, if at all possible.
- Eye is more sensitive at night, especially at blue-green wavelengths.
- To compensate for LED usage, consider introducing lighting code that aims to limit light pollution.

Flagstaff Lighting Code*

What can be gained?

Benefits of a lighting code



* <http://www.flagstaffdarksides.org/for-wonks/lamp-spectrum-light-pollution/>

**PAGE UTILITY ENTERPRISES
REGULAR BOARD MEETING
January 12, 2016**

CALL TO ORDER: The regular meeting of the Page Utility Board was called to order at 5:30 p.m. by Chairman Rick Yanke. The meeting was held in the Utility Conference Room, 640 Haul Road, Page, Arizona.

ROLL CALL: Board members present: Chairman Yanke, Tony Ferrando, Jeff Jones, and Ken Sichi. Shayne Jones was excused and Council Liaison/Vice Mayor John Kocjan was absent.

Staff present: General Manager, Bryan Hill; Finance Director, Catherine Foley; and Executive Secretary, Donna Roberts.

Also present: City Attorney, Joe Estes.

MOMENT OF SILENCE: The Board observed a moment of silence.

APPROVAL OF MINUTES: The December 15, 2015 Rate Hearing minutes were unanimously approved upon a motion by J. Jones and second by Sichi.

The December 15, 2015 regular meeting minutes were unanimously approved upon a motion by J. Jones and second by Sichi.

**HEAR FROM THE
CITIZENS:** None.

UNFINISHED BUSINESS: None.

NEW BUSINESS: Discussion – Budget: Bryan reviewed the current year budget. He asked Board members to provide their input prior to next month's meeting.

Discussion/Possible Action – Western Contract: Motion by J. Jones, seconded by Sichi, to approve Western Area Power Administration (WAPA) Contract No. 15-RMR-2721 for Payment of Peak Reliability, Inc., Charges.

The motion carried unanimously.

Discussion/Possible Action – Insurance Proposal: There was discussion regarding uninsured and underinsured coverage relating to employees traveling in a company vehicle. Bryan was asked to ensure that any injuries to staff would be covered under workers compensation.

Discussion/Possible Action – GM Job Description: Motion by J. Jones, seconded by Ferrando, to approve the General Manager's job description as discussed.

The motion carried unanimously.

REPORTS: General Manager's Reports: Bryan reviewed the December reports.

Financial Report: Catherine presented the October financials.

Committee Reports: None.

Chairman's Report: None.

ANOUNCEMENTS:

The next Board meeting will be February 9, 2016.

ADJOURNMENT:

With no further business, Chairman Yanke adjourned the meeting at 6:55 p.m.

APPROVED:


Chairman, Page Utility Enterprises Board

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R. B. Ward

928-660-9024
Kat021407@gmail.com

February 8, 2016

RE: Page Planning and Zoning Commission

Kim Larson
City Clerk's Office
P.O. Box 1180
Page, AZ 86040

Dear Madam Clerk:

This letter is to inform you of my immediate resignation as a member of the City of Page Planning and Zoning Commission.

Involvement with the Commission has taught me a great deal in these past years and I appreciate the opportunity afforded me.

Thank you for your kind consideration.

Respectfully,

R. B. Ward
P.O. Box 2702
Page, AZ 86040