

# Handout- AI as Your Public Works Assistant

Developed by Marilee Enus with significant help from Open AI's ChatGPT 😊

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## Getting Started in AI

1. Develop a municipal AI policy (examples follow)
  - a. [Arizona State AI Policy](#)
  - b. [Lebanon, NH AI Policy](#)
  - c. [Alameda County, CA AI Policy](#)
  - d. [San Jose, CA AI Policy](#)
2. Identify repetitive, routine, or time-consuming tasks where AI can assist.
  - a. Experiment with small, low-risk tasks to build confidence in using ChatGPT.
3. Develop clear and specific prompts to get accurate and useful outputs.
4. Validate AI-generated outputs to ensure accuracy and relevance.
5. Do not share sensitive or confidential information with AI tools.
6. Train team members on the benefits and responsible use of AI.
7. Monitor progress and adjust workflows based on feedback and outcomes.
  - a. Don't assume ChatGPT understands specific local policies or regulations.
  - b. Don't give up! If there's an error, inform ChatGPT and ask how to avoid it – check your prompt and reiterate it with any changes or clarifications and ask ChatGPT “What can I do to work better with you on this”
8. Explore additional AI applications to expand its impact on your work.

## Ethical Considerations

Public works professionals should prioritize ethical use of AI by validating outputs for accuracy, avoiding confidential data sharing, and ensuring that the AI complements rather than replaces human judgment. It is also recommended for municipalities to explore AI policies. Never share confidential or sensitive data and maintain transparency in AI-assisted work as appropriate.

## Some Potential Ethical Challenges

- Plagiarism and Intellectual Property: Ensure outputs are original and review them for any unintended similarities to existing materials.
- Accuracy: Validate all information generated by AI, as it may sometimes produce plausible but incorrect responses.
- Privacy and Security: It is not recommended to input sensitive or confidential data into AI unless so directed by IT/Leadership under the strict adherence and guidance of an agency policy and procedure.
- Bias: Be aware that AI can reflect biases in its responses.
- Over-Reliance: Use AI as a tool to enhance your work, not as a substitute for expertise.
- Operating without a municipal or agency-wide AI policy to guide use

*Never share confidential, private, or sensitive information with AI unless strictly following your agency's policies and procedures.*

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## Citing AI Work

When using AI to assist with public works tasks, you may wish to include an acknowledgment if the AI *significantly contributed*. Below are several examples of how to disclose the use of AI tools, like ChatGPT, in your work. Each statement is accompanied by suggestions for when it may be appropriate to use.

The following information is taken directly from a conversation with ChatGPT on this topic-

### Key Considerations for AI Citation

#### 1. Substantial Contribution vs. Routine Assistance

- AI should be cited when it plays a **significant** role in drafting, structuring, or generating core content.
- Routine AI use (e.g., grammar checks, minor rewording, brainstorming support) **does not** typically require citation.

#### 2. Alignment with Professional & Academic Norms

- Academic and legal settings may require stricter attribution.
- In professional/public works settings, transparency is good practice, but **excessive citations can unnecessarily complicate documents**.

#### 3. Practicality & Overhead

- If AI is used for early-stage brainstorming but human expertise is the dominant force, disclosure is optional.
- Overuse of AI acknowledgments could dilute their importance when it actually matters.

### When to Cite AI Explicitly

Use an acknowledgment **only if AI significantly shaped the final product** (e.g., full sections drafted by AI, heavy summarization, direct AI-generated analysis). Examples:

- **Formal Reports, Policies, Strategic Documents**

*"This document was developed with assistance from OpenAI's ChatGPT and reviewed for accuracy and relevance by [Your Name]."*

- **Technical Reports with AI-Generated Data Summaries**

*"This report includes data summaries generated with the help of ChatGPT, validated and expanded upon by the project team."*

- **Public-Facing Communications with Substantial AI Input**

*"Portions of this content were generated using ChatGPT to streamline the writing process. Final edits and approvals were completed by [Your Name]."*

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**When AI Does NOT Require Citation** - You **do not need to cite** ChatGPT in the following cases:

- ✔ **Brainstorming & Outlining** – AI was used to generate ideas but did not contribute to the final text.
- ✔ **Minor Editing or Rewording** – AI was used to refine clarity, check grammar, or suggest alternative phrasing.
- ✔ **Routine or Administrative Uses** – AI helped draft routine emails, meeting notes, or social media captions.

### **(Detail taken directly from ChatGPT ends here)**

*Never share confidential, private, or sensitive information with AI unless strictly following your agency's policies and procedures.*

## ChatGPT Applications for Public Works Professionals

Below are 10 examples of how public works professionals can apply ChatGPT in their work. Each example includes a suggested prompt to help you get started.

### Drafting Public Notices

- Prompt: Write a public notice for a two-week road closure due to bridge repairs.

### Maintenance Plan Development

- Prompt: Create a snowplow maintenance schedule for the winter season.

### Budget Justifications

- Prompt: Draft a justification for purchasing a new grader for the fleet.

### Policy Simplification

- Prompt: Simplify a policy document on stormwater management for citizen understanding.

### Training Materials

- Prompt: Create an outline for a workshop on traffic control safety.

### Workforce Communication

- Prompt: Draft an email updating staff on new equipment training requirements.

### Community Engagement

- Prompt: Generate ideas for a community event promoting roadway safety awareness.

### Incident Reports

- Prompt: Write a detailed report of a roadwork zone accident for internal review.

### Grant Writing

- Prompt: Draft a grant proposal to secure funding for pedestrian crossing improvements.

### Social Media Outreach

- Prompt: Write a Facebook post highlighting the success of a recent infrastructure project.

## What Inputs Might a DPW Director or Administrator Need to Provide to Use ChatGPT Effectively?

While ChatGPT can generate reports, justifications, public messaging, analysis, and planning documents, its effectiveness depends on having access to the right inputs from the DPW team. Whether it's financial data, maintenance records, traffic reports, or public complaints, the more structured and specific the input, the more tailored and actionable the output. **HOWEVER- ALWAYS FOLLOW YOUR MUNICIPAL POLICY AND BE ALERT TO SECURITY AND PRIVACY BEST PRACTICES!** Do not share personnel, private, financial, confidential, or other information with AI without the proper policies and procedures in place for security.

Below is a list of common inputs that would improve ChatGPT's ability to generate useful results, followed by examples of how these inputs make a difference in real DPW work.

- Budget and Financial Data *!!Never share confidential, private, or sensitive information unless strictly following your agency's policies and procedures.!!*
- Past and current DPW budgets
- Cost estimates for materials, labor, and contracts
- Historical expenditure trends

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- Funding sources (grants, state/federal allocations, local funds)
- Expected lifecycle costs of equipment, roads, and facilities
- Infrastructure and Asset Management Records
- Pavement condition assessments
- Road maintenance history and schedules
- Equipment and fleet inventory with age, condition, and maintenance history
- Culvert and drainage system maps and conditions
- Utility coordination plans
- Operational Reports and Logs
- Fleet maintenance logs and repair costs
- Snow and ice material usage tracking
- Work order completion times and backlogs
- Staff scheduling and overtime records
- Fuel consumption reports
- Policies, Plans, and Standard Procedures
- Snow and ice control policies
- Capital Improvement Plans (CIP)
- Emergency response procedures
- Standard Operating Procedures (SOPs) for tasks like pothole patching, sidewalk maintenance, or fleet inspections
- Union agreements or job classification guidelines *!!Never share confidential, private, or sensitive information unless strictly following your agency's policies and procedures.!!*
- Public and Stakeholder Communications
- Resident complaints and service requests *!!Never share confidential, private, personally identifiable, or sensitive information unless strictly following your agency's policies and procedures.!!*
- Meeting minutes and board reports
- FAQs about DPW operations
- Public notices or letters explaining upcoming projects
- Social media engagement reports
- Traffic and Transportation Data
- Traffic counts and patterns for major roads
- Crash and safety reports
- Pedestrian and bicycle facility assessments
- Parking or road use studies
- GIS mapping data for DPW infrastructure
- Regulatory and Compliance Information
- Environmental permits and stormwater regulations
- ADA compliance requirements for sidewalks and crossings
- MS4 stormwater management reports

*Never share confidential, private, or sensitive information with AI unless strictly following your agency's policies and procedures.*

- State and federal grant eligibility guidelines
- Safety inspection reports *!!Never share confidential, private, or sensitive information unless strictly following your agency's policies and procedures.!!*

### **Examples of How Inputs Improve ChatGPT's Effectiveness**

**For all of the below- *Never share confidential, private, or sensitive information unless strictly following your agency's policies and procedures!***

#### **Example 1: Developing a Justification for Fleet Replacement**

- DPW Director Provides:
  - Fleet inventory with age, condition, and maintenance costs
  - Breakdown of downtime per vehicle
  - Cost comparisons of continued maintenance vs. replacement
  - Operational impact of breakdowns on service delivery
- How ChatGPT Helps:
  - Summarizes key points into a funding request memo
  - Creates a cost-benefit analysis for leasing vs. purchasing
  - Drafts a fleet replacement schedule based on priority needs

#### **Example 2: Drafting a Citizen-Facing Snow Operations Guide**

- DPW Director Provides:
  - Current winter maintenance policy
  - Plow route prioritization details
  - Snow emergency parking restrictions
  - Common resident complaints about snow removal
- How ChatGPT Helps:
  - Writes a public-friendly guide explaining when and where roads are plowed
  - Develops a set of FAQs addressing common concerns
  - Creates a draft social media campaign educating residents on DPW's winter operations

#### **Example 3: Optimizing a Road Repaving Schedule**

- DPW Director Provides:
  - Pavement condition ratings for town roads
  - Traffic volume data for each road segment
  - Planned underground utility work that may impact repaving schedules
  - Budget availability and cost estimates for repaving options
- How ChatGPT Helps:
  - Creates a prioritized repaving schedule based on condition and funding constraints
  - Drafts a presentation for town officials explaining repaving priorities
  - Summarizes the cost savings of proactive pavement preservation

#### **Example 4: Writing an RFP for a Stormwater Improvement Project**

- DPW Director Provides:
  - Project scope and specific problem areas

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- Regulatory requirements for stormwater compliance
- Budget allocation and funding source details
- Any past reports or studies on drainage issues
- How ChatGPT Helps:
  - Drafts a clear, professional RFP that outlines project requirements
  - Ensures compliance with state and federal funding guidelines
  - Creates an evaluation rubric for scoring contractor bids

Example 5: Responding to a Public Records Request

- DPW Director Provides:
  - Requested documents or reports
  - Any legal or procedural guidelines for records requests
  - Background information on the request, if available
- How ChatGPT Helps:
  - Drafts a professional and legally appropriate response
  - Summarizes key findings from reports in plain language
  - Ensures transparency while protecting sensitive information

*UNH T2 offers **free, customized Technical Assistance and resources** to local road agencies on road maintenance and transportation infrastructure topics. This support may include recommended readings, resources, follow-ups, and insights from our Technical Specialists or broader network.*

**Important Disclaimer:** *UNH T2 and its Technical Specialists **do not** provide legal advice, engineering design, project approvals, or regulatory guidance. Assistance is for general informational purposes only and **does not** constitute design recommendations, regulatory guidance or approval, or "shovel-ready" engineering. We encourage you to review state and local regulations, consider local conditions and agency policies, and consult licensed professionals before making decisions.*

*For support or resources, contact [t2.center@unh.edu](mailto:t2.center@unh.edu) or visit [t2.unh.edu](http://t2.unh.edu).*

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