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Additional comments on BMP F6.70 Light Rail Elevated Guideway BMP

Light Rail BMPs: BMP F6.70: Light Rail Elevated Guideway Dispersion - Errata and additional commentary

While this appears to be consistent with dispersion in general, dispersion itself is questionable as environmentally sound; that's commented on under **V-3 Dispersion BMP expanded discussion comments** (separate file submittal). Comments specific to BMP F6.70 follow, noting a bit of overlap with the noted broader commentary on dispersion.

- Under **Dispersal Device** (Volume V - Chapter 3 - Page 765), the three bullets and **Note** under "The dispersal device shall" – would be more appropriately be moved up under **Applications and Limitations** (p 764).
- It is unclear from the Figure V-3.3, Elevated Guideway Dispersion, if the areas marked "Dispersion area" constitute the full extent of the dispersion area, or if runoff is expected to continue to disperse downslope from those areas, and those areas would actually be better characterized as landing areas within a larger dispersions area. If the former, then the drawings should show an interceptor ditch, channel, or French drain below each of the areas marked "Dispersion area". If the latter, consider changing the terminology to "Landing area" or "Dispersion landing area".
- The landscaping requirement for the dispersal area to be "An area a minimum of 6 feet wide" is too vague to ensure an adequately wide dispersion area as the elevation of the guideway from ground increases. Stating a minimum area without requiring more depending on elevation will rarely if ever result in a wider area. Recommend language to the effect that 6 feet is the minimum, and that the design engineer must work with the dispersion device manufacturer to ascertain the dispersion device droplet fall width depending on elevation, and that should set the larger width.
- In the case of light rail with exposed copper conductors, the highest volume pollutants are expected to be – ordered by likely volume/load – Cu from the overhead conductors and related exposed electrical components, Zn from supporting infrastructure (e.g., pylons, railings, conduits, and shelter components), Fe from steel rails, wheels, and brake rotors, indeterminate variable materials from brake pads, and track lubricants applied to track curves and switches. While the lubricants may break down in soil – as long as they're not halogenated (e.g., contain PTFE), the metals will not. Focusing on metals, then, and given the GWQS for the three noted metals, exceeding GWQS is extraordinarily unlikely; however, *immediate or eventual runoff to surface waterbodies is a concern*.

  This suggests at the very least putting the following restrictions on dispersion: something along the line of:

  - *Dispersion or infiltration to ground is not allowed within ¼ (one quarter) mile of any surface water body or its buffer that has or is designated as an aquatic life use, unless there is no direct hydrologic connection to that surface water, as determined and documented by a licensed hydrogeologist.*
- Apparent errata / awkward drawing element

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  Figure V-3.3: Elevated Guideway Dispersion

  Crowned Guideway

  Slope given as a ratio would be correctly expressed as 50:1 min. and 4:1 max; but as a drawing with relative dimensions, the horizontal dimension ought to be designated as 4 min. and 50 max; as drawn it is confusing.

- Consider that even 0.5 inch can yield undesirable channelization, and whether it's necessary to allow that.